

Supplementary Data

TABLE 1
Common Professionalism Subcompetency Themes Among the 13 Core Specialties With Available Resources and Strategies for Remediation

Professionalism			
<u>Critical initial step:</u> Assess for mental health or physical illness, substance use disorder, or external stressors that could be contributing to the lapses and refer for counseling or care according to program and institutional policies. If none is identified, proceed with suggested remediation techniques and resources in this table.			
<u>For all subcompetencies and Milestone themes:</u>			
<ul style="list-style-type: none"> • Intentionally solicit and discuss specific multisource feedback from faculty, nurses, peers, self.⁶ • Utilize reflection,⁷ OSCE,⁸ video-taped direct-observation assessment and review,^{9,10} simulation,¹¹ and coaching.¹² 			
Subcompetency	Milestone Theme	% Specialties With Theme	Suggested Remediation Techniques and Resources
	Recognizes/seeks help/addresses complex situations in a professional manner	100	Pick a mentor role model of professionalism to shadow and/or meet with periodically ¹³ Review complex cases with professionalism challenges (either standardized or from prior patient encounters) and perform analysis of issues ⁵ Read specific journal articles regarding professionalism; facilitate mentored small group discussion and reflection
	Confidence and self-awareness of limits	46.2 ^a	Review graduated level of responsibility policies and discuss when to request assistance from senior residents or attending physicians ⁵ Participate in patient case scenarios (standardized patients, simulation, or oral cases); debrief performance using a checklist and develop a performance improvement plan; follow up with role modeling or self-remediated example ¹⁴

Professional Behavior and Ethical Principles			Review literature on medical uncertainty and help develop an educational session for trainees ¹⁵
	Professionalism lapses: reporting, responding and intervening to prevent or minimize occurrences	100	Review current policies of department, institution, or state and develop a plan for an impaired or disruptive colleague ⁵ Review dangers of social media, discuss infractions, and develop a plan for removal of certain online material ¹⁶
	Analyzes situations using ethical principles and uses them in decision-making	100	Participate in written/simulated case scenarios with emphasis on the impact of physician’s beliefs on patient care and experience ¹⁴ Perform a self-reflection analysis regarding perceived difficult patients; develop a plan to care for these patients in an unbiased manner ¹⁴ Review literature on ethical uncertainty and help develop an educational session for trainees
Accountability and Conscientiousness	Implements strategies to ensure needs of patients/teams met	100	Meet with a set number of patients and summarize reflections of the experience with regards to patients’ perspectives, and the physician role in the patient experience as part of a “patient advocate shift” ⁵ Shadow a social worker or patient representative to learn how to advocate for patients and gain patient perspectives; write a reflection ⁵
	Timely and detailed task completion; recognizes barriers to task completion (self and others), including administrative tasks and patient care	100	Review monthly adherence to requirements (eg, reporting duty hours, procedure log, assignments) with program leadership ¹⁷ To model successful executive functioning skills, work with program leadership to create an accountability schedule where tasks are plotted out based on urgency, time needed and schedule availability ¹⁸
Self-Awareness And Well-Being	Develops a plan to remediate or improve self/team	92.3 ^b	Perform a monthly self-assessment of professionalism with examples of cases handled effectively and those in need of improvement ¹⁹
	Recognizes and promotes personal and professional well-being,	100	Participate in wellness education, including on narrative medicine and visual thinking strategies ²⁰

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	including wellness, burnout, fatigue, and stress-recognition and mitigation		<p>Meet with program leadership to discuss professional appearance, punctuality, and wellness techniques; identify barriers to success²¹</p> <p>Use screening tools and the institution’s employee assistance program to assess and monitor progress²²</p>
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Abbreviation: OSCE, objective structured clinical examination.

^a Present in family medicine, neurology, ophthalmology, pathology, radiology, and surgery.

^b Present in all specialties except for anesthesiology.

TABLE 2

Common Interpersonal and Communication Skills Subcompetency Themes Among the 13 Core Specialties With Available Resources and Strategies for Remediation

Interpersonal and Communication Skills			
<u>Critical initial step:</u> Assess for mental health or physical illness, substance use disorder, or external stressors that could be contributing to the lapses and refer for counseling or care per program and institutional policies. If none is identified, proceed with suggested remediation techniques and resources in this table.			
<u>For all subcompetencies and Milestone themes:</u>			
<ul style="list-style-type: none"> • Intentionally solicit and discuss specific multisource feedback from faculty, nurses, peers, self.⁶ • Utilize reflection,⁷ OSCE,⁸ video-taped direct-observation assessment and review,^{9,10} simulation,¹¹ and coaching.¹² 			
Subcompetency	Milestone Theme	% Specialties With Theme	Suggested Remediation Techniques and Resources
Patient and Family Centered Communication	Shared decision making	92.3 ^a	<ul style="list-style-type: none"> • Develop an educational session on aspects of shared decision-making^{23,24} • Mentored reading of introductory chapters in textbooks: <i>Shared Decision Making in Adult Critical Care</i> and <i>Shared Decision Making in Healthcare</i>^{25,26} • Use tool to improve shared decision making (eg, AHRQ’s SHARE²³)
	Establish therapeutic relationships regardless of complexity	84.6 ^b	<ul style="list-style-type: none"> • Use tools for assessment and monitoring of progress (eg, RAND PSQ,²⁷ RUCIS,²⁸ C-I-CARE²⁹); reflect on areas for improvement⁸ • Read material such as “Martin’s Mind Map”³⁰ and <i>Crucial Conversations</i>³¹; reflect on areas to incorporate into future patient encounters • Review patient evaluations if available through formalized feedback mechanisms or follow-up programs
	Compassionately delivers patient information, elicits patient values	53.8 ^c	<ul style="list-style-type: none"> • Debrief patient encounters with a faculty mentor during scheduled meetings • Schedule direct observation in the clinical environment and discuss patient interactions

			<ul style="list-style-type: none"> • Participate in simulated or standardized patient encounters to assess and monitor general communication skills via checklist and debrief after the interaction²⁸ • Participate in simulated instructional scenarios for breaking bad news, disclosing errors, and patient refusal/against medical advice with evaluation and debriefing³² • Participate in mentored reading from “I’m Here: Compassionate Communication in Patient Care”³³
	Identifies/recognizes and addresses barriers to communication, including biases	100	<ul style="list-style-type: none"> • Participate in meetings with patient relations with focus on patient complaints related to communication and preventive strategies • Implement the Implicit Association Test for increased awareness of unconscious or implicit bias³⁴ • Participate in instructional courses on cultural competency training • Engage with a professional coach to promote self-reflection and identification of communication barriers
	Acknowledges or negotiates conflict	69.2 ^d	<ul style="list-style-type: none"> • Participate in meetings or structured rounds with patient relations/patient experience with focus on patient complaints related to communication and preventive strategies • Attend conflict resolution and communication courses, reflect on current practice, and develop a performance improvement plan • Complete a conflict style assessment tool (eg, Thomas-Kilmann Conflict MODE instrument)³⁵
Interprofessional and Team Communication	Requests consults effectively and integrates recommendations	53.8 ^e	<ul style="list-style-type: none"> • Implement a structured tool for consultations (eg, 5 Cs,^{36,37} PIQUED,³⁷ CONSULT,³⁸ CONSULT card³⁹)
	Communicates effectively with individual health care team members	100	<ul style="list-style-type: none"> • Utilize a faculty mentor for scheduled meetings or shadowing to discuss interactions with colleagues and staff • Work alongside or shadow other members on the healthcare team (eg, nurse, social worker, physical therapist, pharmacist) to gain perspective on their roles • Participate in mentored reading program (suggested books include <i>The Speed of Trust</i>,⁴⁰ and <i>The 17 Indisputable Laws of Teamwork</i>:

			<p><i>Embrace Them and Empower Your Team</i>⁴¹⁾</p> <ul style="list-style-type: none"> • Use tools to facilitate communication among the health care team^{42,43} • Participate in courses focused on team communication (eg, TeamSTEPPS)⁴⁴ • Schedule direct observation in the clinical environment and discuss communication with team members • Participate in simulated team-based cases and debrief interactions, including use of videotaped sessions⁴⁵
	Adapts and effectively communicates with health care teams using flexible communication strategies	100	<ul style="list-style-type: none"> • Participate in mentored reading program (suggested books include <i>How to Win Friends and Influence People</i>,⁴⁶ <i>Emotional Intelligence 2.0</i>,⁴⁷ and <i>Crucial Conversations</i>³¹⁾ • Review dimensions of team communication and apply/assess in clinical environment¹⁰ • Participate in TeamSTEPPS Training⁴⁴
	Solicits and provides constructive feedback	69.2 ^f	<ul style="list-style-type: none"> • Receive feedback through standardized videotaped or simulation scenarios, direct observation, and 360 evaluations to identify specific areas of communication that need improvement • Participate in an educational session or mentored reading program on how to deliver effective feedback (eg, <i>Thanks for the Feedback</i>)⁴⁸
Communication Within Health Care Systems	Records information accurately, including complex decisions	84.6 ^g	<ul style="list-style-type: none"> • Review select charts with faculty mentor evaluating completeness, accuracy, and clinical decision making • Schedule a feedback session with departmental Billing and Coding staff to review documentation elements • Participate in educational session based on specialty-specific tools (eg, PNAPE,⁴⁹ and PDQI⁵⁰⁾
	Effectively communicates (various forms) within the healthcare system; [models] written/verbal communication	100	<ul style="list-style-type: none"> • Participate in mentored reading program (eg, <i>How to Say It</i>,⁵¹ and <i>Emotional Intelligence 2.0</i>)⁴⁷⁾ • Review appropriate protocols for email/written/verbal communication
	Provides feedback and suggestions about system concerns (eg,	61.5 ^h	<ul style="list-style-type: none"> • Review hospital-based policies and access for reporting or disclosing patient safety events

compliance, patient safety, privacy [including PHI])		<ul style="list-style-type: none"> • Mentored review with faculty and compliance office on privacy policies protocols for reporting violations • Mentored reading of literature regarding disclosure of medical errors⁵²
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Abbreviation: OSCE, objective structured clinical examination.

- ^a Present in all specialties except for ophthalmology.
- ^b Present in all specialties except for radiology and surgery.
- ^c Present in emergency medicine, family medicine, neurology, pathology, pediatrics, psychiatry, radiology.
- ^d Present in anesthesiology, emergency medicine, family medicine, neurology, pathology, pediatrics, psychiatry, radiology, surgery.
- ^e Present in all specialties except for OB/GYN, ophthalmology, orthopedics, pathology, psychiatry, and radiology.
- ^f Present in all specialties except for OB/GYN, orthopedics, pediatrics, and radiology.
- ^g Present in all specialties except for pathology and radiology.
- ^h Present in all specialties except for internal medicine, neurology, OB/GYN, pediatrics, and surgery.

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Literature Search Protocol

PubMed Search Terms

Concept 1: Language and Date Limit

eng[la] AND 2000:2022[dp]

Concept 2: Remediation

“remediation”[tw] OR “remedial”[tw] OR “cognitive remediation”[mh] OR “remedia*”[tw]

Concept 3: Interns and Residents in Graduate Medical Education

“education, medical, graduate”[mh] OR “graduate medical education”[tw] OR “Internship and Residency”[mh] OR “internship”[tw] OR “intern*”[tw] OR “residency”[tw] OR “resident*”[tw]

Concept 4: Professionalism

“Interpersonal relations”[mh] OR “interprofessional relations”[mh] OR “interdisciplinary communication”[mh] OR “physician-nurse relations”[mh] OR “professional-family relations”[mh] OR “professional-patient relations”[mh] OR “physician-patient relations”[mh] OR “social skills”[mh] OR “professionalism”[mh] OR “ethics, professional”[mh] OR “ethics, clinical”[mh] OR “ethics, medical”[mh] OR “interpersonal”[tw] OR “interprofessional”[tw] OR “interdisciplinary communication”[tw] OR “physician-nurse”[tw] OR “doctor-nurse”[tw] OR “physician-patient”[tw] OR “doctor-patient”[tw] OR “social skill*”[tw] OR “professionalism”[tw] OR “accountability”[tw] OR “ethics”[tw] OR “ethical”[tw] OR “self-aware”[tw] OR “self-awareness”[tw] OR “well-being”[tw] OR “wellbeing”[tw] OR “social responsibility”[mh] OR “conscientiousness”[tw] OR “conflict resolution”[tw] OR “negotiating”[mh] OR “emotional intelligence”[mh] OR “reflection”[tw] OR “Psychological Well-Being”[mh] OR “wellness”[tw] OR “burnout”[tw] OR “fatigue”[tw] OR “fatigue”[mh] OR “stress mitigation”[tw] OR “stress recognition”[tw] OR “team*”[tw] OR “Crew Resource Management, Healthcare”[mh] OR “Task Performance and Analysis”[mh] OR “task completion”[tw] OR “duty”[tw] OR “sense of responsibility”[tw] OR “relational autonomy”[mh] OR “staff development”[mh] OR “learning plan*”[tw] OR “prejudice”[mh] OR “bias mitigation”[tw] OR “compassion”[tw] OR “Time management”[mh] OR “feedback”[tw] OR “formative feedback”[mh] OR “Attitude of Health Personnel”[mh] OR “fitness for duty”[tw] OR “fit for duty”[tw] OR “confidentiality”[mh] OR “confidential*”[tw] OR “Culturally Competent Care”[mh]

Concept 5: Interpersonal & Communication Skills

“communication”[mh], OR “Interpersonal relations”[mh] OR “interprofessional relations”[mh] OR “interdisciplinary communication”[mh] OR “physician-nurse relations”[mh] OR “professional-family relations”[mh] OR “professional-patient relations”[mh] OR “physician-patient relations”[mh] OR “social skills”[mh] OR “interpersonal”[tw] OR “interprofessional”[tw] OR “interdisciplinary communication”[tw] OR “physician-nurse”[tw] OR “doctor-nurse”[tw] OR “physician-patient”[tw] OR “doctor-patient”[tw] OR “social skill*”[tw] OR “professionalism”[tw] OR “accountability”[tw] OR “decision making, shared”[mh] OR “Shared decision making”[tw] OR “decision-making”[tw] OR “relationships with patients”[tw] OR “consult*”[tw] OR “referral and consultation”[mh] OR “patient care team”[mh] OR “team

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communication"[tw] OR "Closed loop communication"[tw] OR "charting"[tw] OR
"documentation"[tw] OR "Electronic Health Records "[mh] or "documentation"[mh] OR
"record keeping"[tw] OR "Medical Records, Problem-Oriented"[mh] OR "Communication
Methods, Total"[mh] OR "communicat*"[tw] OR "feedback"[tw] OR "disclosure"[mh] OR
"Health literacy"[mh] or "health literacy"[tw] OR "cultural competence"[tw] or "listening"[tw]

PubMed Search Execution

Professionalism:

Concept 1 AND Concept 2 AND Concept 3 AND Concept 4

Interpersonal Communication:

Concept 1 AND Concept 2 AND Concept 3 AND Concept 5