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The problem resident behavior guide: strategies for remediation

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Abstract In 2012, the ACGME supplemented the core competencies with outcomes-based milestones for resident performance within the six competency domains. These milestones address the knowledge, skills, abilities, attitudes, and experiences that a resident is expected to progress through during the course of training. Even prior to the initiation of the milestones, there was a paucity of EM literature addressing the remediation of problem resident behaviors and there remain few readily accessible tools to aid in the implementation of a remediation plan. The goal of the "Problem Resident Behavior Guide" is to provide specific strategies for resident remediation based on deficiencies identified within the framework of the EM milestones. The "Problem Resident Behavior Guide" is a written instructional manual that provides concrete examples of remediation strategies to address specific milestone deficiencies. The more than 200 strategies stem from the experiences of the authors who have professional experience at three different academic hospitals and emergency medicine residency programs, supplemented by recommendations from educational leaders as well as utilization of valuable education adjuncts, such as focused simulation exercises, lecture preparation, and themed ED shifts. Most recommendations require active participation by the resident with guidance by faculty to achieve the remediation expectations. The ACGME outcomes-based milestones aid in the identification of deficiencies with regards to resident performance without providing recommendations on remediation. The Problem Resident Behavior Guide can therefore have a significant impact by filling in this gap.

Keywords Graduate medical education · Remediation · Milestones

Introduction

The "Core Competencies", approved by the ACGME in 1999, are an educational program that define six domains across which a graduating resident must demonstrate proficiency: medical knowledge, patient care, systems-based practice, practice-based learning, professionalism, and interpersonal skills. In 2012, the ACGME supplemented the core competencies with sub-competencies and outcomes-based milestones for resident performance within the six previously established domains [1]. These milestones address knowledge, skills, attitudes, as well as other measurable attributes and are designed to monitor resident progress throughout the course of training and allow for the provision of concrete feedback during resident reviews.

Given the constantly fluctuating shift schedules, unpredictable clinical experiences, different attending leadership each shift, and absence of traditional teaching rounds, emergency medicine (EM) residencies are at concerning risk for encountering problem residents, defined as a

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"trainee who demonstrates a significant enough problem that requires *intervention* by someone of authority, usually the program director or chief resident" [2]. While the term "problem resident" is deemed to carry a negative connotation, it more often refers to behaviors that are capable of remediation, rather than serving as a derogatory reference to a resident's personality. Unfortunately, while the natural tendency may be to criticize these residents or anticipate that they will improve as time passes, if these issues are not addressed, there are many potential ramifications. Problem residents can threaten their medical training, professional development, and career satisfaction. They can also negatively influence the educational experience of their peers, reduce optimal team functioning within the program, and produce additional work for program directors.

While there are many types of problem resident behaviors, the unifying feature is an inability to perform adequately in one or more of the core competencies [3]. An essential element in the remediation of a problem resident is early identification that a problem exists. While this determination may result from a single critical event, it is more commonly discovered through a sequence of less serious incidents that result in the identification of a pattern of behavior [4]. For instance, in the case of professional deficiencies, it is often the informal faculty complaints that lead to identification [5]. Therefore, in order to improve the detection of problem resident behaviors, there must first be a system in place that allows for continual resident feedback.

The EM council for residency directors has published general guiding principles for the implementation of a resident remediation plan [6]:

1. Make efforts to understand the challenges of remediation, and recognize that the goal is successful correction of deficits, but that some deficits are not remediable.
2. Make efforts aimed at early identification of residents requiring remediation.
3. Create objective, achievable goals for remediation and maintain strict adherence to the terms of those plans, including planning for resolution when setting goals for remediation.
4. Involve the institution's Graduate Medical Education Committee (GMEC) early in remediation to assist with planning, obtaining resources, and documentation.
5. Involve appropriate faculty and educate those faculty into the role and terms of the specific remediation plan.
6. Ensure appropriate documentation of all stages of remediation.

Unfortunately, there is a paucity of publications within the EM literature that address the problem resident, and when the need for remediation is identified, there are few readily accessible tools to aid in its implementation. The study authors, who have professional experience at three different academic hospitals with emergency medicine residency programs created "The Problem Resident Behavior Guide", an instructional manual that provides more than 200 objective and achievable strategies for remediation based on deficiencies identified within the framework of the EM milestones of the ACGME core competences. The remediation strategies stem from the experiences of the three study authors supplemented by recommendations from additional education leaders. The authors also conducted an extensive Pubmed literature search on the topic of remediation, and incorporated recommendations from the internal medicine, critical care, surgery and family practice literature on the subject of remediation. The authors also researched the utility of valuable educational adjuncts, such as focused simulation exercises, lecture preparation, and themed ED shifts across many specialties within the medical field, as well as the collegiate, theology, aviation, and psychology literature (see online appendix). Most recommendations require active participation by the resident with guidance by faculty to achieve the remediation expectations.

Strategies for remediating problem resident behaviors based on EM milestones

Emergency stabilization (PC1)

Prioritizes critical initial stabilization action and mobilizes hospital support services in the resuscitation of a critically ill or injured patient and reassesses after stabilizing intervention.

1. Does not recognize unstable vital signs:
   (a) During shifts, the resident can be encouraged to start all patient encounters with an assessment of vital signs.
2. Does not recognize when a patient is unstable requiring immediate intervention. Or, does not perform a primary assessment on a critically ill or injured patient:
   (a) The resident's role on shift can be prioritized toward seeing the critically ill medical and trauma patients.
   (b) The resident can participate in additional clinical time with the hospital's code teams or rapid response teams and subsequently complete follow-up logs on patients attended to.

(c) The resident can participate in additional simulation sessions targeting patient presentations of critical illness.
(d) The resident can prepare lectures for the rotating medical student curriculum on topics such as "The ABCs of Trauma" and "Surviving Sepsis".

3. Does not manage and prioritize critically ill or injured patients. Or, does not reassess after implementing stabilizing intervention:

(a) The resident can utilize elective time to perform an additional ICU rotation.
(b) The resident can be required to update the attending about the critically ill patients every 15 min and update the medical documentation accordingly.

4. Does not recognize in a timely fashion when further clinical intervention is futile. Or, does not integrate hospital support services into a management strategy for a problematic stabilization situation:

(a) The resident can provide a summary of the evidence-based literature concerning survival from cardiac arrests for a journal club or asynchronous lecture.
(b) The resident can participate in case-based discussions with an attending or chief resident, discussing scenarios such as problematic stabilizations and available hospital support services (examples including cooling strategies for cardiac arrest survivors, consulting services for difficult airways, preterm emergency deliveries, etc.).

Performance of a focused history and physical examination (PC2)

Abstracts current findings in a patient with multiple chronic medical problems and, when appropriate, compares with a prior medical record and identifies significant differences between the current presentation and past presentations.

1. Does not perform and communicate a reliable, comprehensive history and physical examination:

(a) The resident can be encouraged to review the online OSCE videos highlighting appropriate physical examination.
(b) The resident can spend 2 h shifts shadowing a senior resident or attending who can focus bedside teaching time towards physical examination maneuvers.
(c) The resident can attend and facilitate teaching a medical student physical diagnosis class.

2. Does not perform and communicate a focused history and physical examination which effectively addresses the chief complaint and urgent patient issues:

(a) The resident can develop a study guide with examples of appropriate historical questions for given chief complaints.
(b) The resident can review charts with a billing specialist to emphasize the necessary components to a medical chart.
(c) The resident can attend weekly meetings with the chief resident or selected faculty member during which cases will be presented and the resident will have the opportunity to practice obtaining an appropriate clinical history.
(d) At the conclusion of each ED presentation, the attending physician can review the presentation with the resident, highlighting changes to be made for future presentations.

3. Does not prioritize essential components of a history given a limited or dynamic circumstance:

(a) The resident can develop an asynchronous learning presentation highlighting the most important historical details that need to be obtained for the 15 most common ED chief complaints.

4. Does not prioritize essential components of a physical examination given a limited or dynamic circumstance:

(a) The resident can re-accompany the attending physician into the patient's room when a physical examination is deemed inadequate in order to have appropriate behavior role modeled.

Diagnostic studies (PC3)

Applies the results of diagnostic testing based on the probability of disease and the likelihood of test results altering management.

1. Does not determine the necessity of diagnostic studies:

(a) The resident can create a study guide highlighting the appropriate diagnostic workup for a variety of common ED chief complaints.
(b) The resident can create his or her own order-sets for common chief complaints to be used on shift.

2. Does not order appropriate diagnostic studies or perform appropriate bedside diagnostic studies and procedures:

(a) The resident can be required to discuss the case and appropriate workup with the

attending physician prior to ordering diagnostic studies.
   (b) The resident can teach a lecture to the rotating medical students concerning the appropriate diagnostic workup for a variety of common ED chief complaints.

3. Does not prioritize essential testing or interpret results of a diagnostic study, recognizing limitations and risks, seeking assistance when appropriate. Or, does not review risks, benefits, contraindications and alternatives to a diagnostic study or procedure:
   (a) The resident can meet with the chief resident or selected faculty member on a weekly basis to discuss the appropriate and essential diagnostic workup for common ED chief complaints.
   (b) The resident can create a study guide of common ED diagnostic studies with their risks, benefits, and alternatives to share with other residents.
   (c) The resident can have additional practice of informed consent discussions during simulations with standardized patients or procedural simulations.
4. Does not use diagnostic testing based on pre-test probability of disease and likelihood of test results altering management. Or, does not practice cost-effective ordering of diagnostic studies. Or, does not understand the implications of false positives and negatives for post-test probability:
   (a) The resident can meet with a member of the research faculty to discuss the application of statistical principles to ED testing.
   (b) The resident can prepare an asynchronous learning presentation highlighting the sensitivity and specificity of the ten most commonly ordered ED tests.
   (c) The resident can focus follow-up logs on comparison of the ultimate diagnosis with ED testing. (Example: positive stress tests with negative ED troponin).
   (d) For the resident who orders too many diagnostic studies, he/she can spend an afternoon with the ED billing department in order to learn the associated patient charges for ED evaluation.

Diagnosis (PC4)

Based on all of the available data, narrows and prioritizes the list of weighted differential diagnosis to determine appropriate management.

1. Does not construct a list of potential diagnosis based on chief complaint and initial assessment:
   (a) Attending physicians can focus the resident's patient presentations on shift to a discussion of differential diagnosis for each encounter.
   (b) A chief resident or selected faculty member can conduct a weekly core content review focusing on differential diagnosis for common ER chief complaints.
   (c) The resident can present a lecture to the rotating medical students about differential diagnosis for common ED presentations.
   (d) The resident can prepare an asynchronous leaning presentation of top ten ER chief complaints and their associated differential diagnosis.
2. Does not construct a list of potential diagnosis, based on the greatest likelihood of occurrence. Or, does not construct a list of potential diagnosis with the greatest potential for morbidity and mortality.
   (a) Attending physicians can focus the resident's patient presentations on shift to a discussion of "worst-case" scenarios for each encounter.
   (b) The resident can review and create "cheat sheets" of tables for differential diagnosis for common chief complaints. He or she can then narrow down or cross-out items for selected patient encounters on shift.
   (c) The resident can participate in additional simulation sessions with the chief resident or selected faculty member targeting critical illness and "can't miss" ED diagnoses.
   (d) The resident can create a presentation for the rotating medical student curriculum highlighting the "can't miss" ED diagnoses for a given chief complaint.
3. Does not use all available medical information to develop a list of ranked differential diagnosis including those with the greatest potential for morbidity or mortality. Or, does not correctly identify "sick versus not sick" patients. Or, does not revise a differential diagnosis in response to changes in a patient's course over time:

(a) The resident can spend additional time in the triage of patients solely to identify "sick versus not sick".
(b) The resident can update attending physicians with results of studies and changes in patient course, identifying those that are consistent or inconsistent with leading diagnosis.

4. Does not synthesize all of the available data and narrow and prioritize the list of weighted differential diagnoses to determine appropriate management:

   (a) The attending physician can ask the resident to provide at least two updates with a re-organized differential diagnosis as diagnostic studies become available for each patient encounter.

Pharmacotherapy (PC5)

Selects and prescribes appropriate pharmaceutical agents based upon relevant considerations such as mechanism of action, intended effect, financial considerations, possible adverse effects, patient preferences, allergies, potential drug-food and drug–drug interactions, institutional policies, and clinical guidelines; and effectively combines agents and monitors and intervenes in the advent of adverse effects in the ED.

1. Does not know different classifications of pharmacologic agents and their mechanism of action. Or, does not consistently ask patients for drug allergies:

   (a) The resident can create 50 flashcards with the most common "need-to-know" medications, their indications, and dosage. The chief resident will then test ten medications each week with the resident. At the end of 5 weeks, there will be a cumulative test for all fifty medications. The resident must continue testing each week until a pre-determined passing score is obtained, and then once a month until the deficiency is corrected.
   (b) The chief resident, selected faculty member, or ED pharmacist can conduct a weekly core content review focusing on pharmacology as it applies to commonly administered emergency department medications.

2. Does not apply medical knowledge for selection of appropriate agent for therapeutic intervention. Or, does not consider potential adverse effects of pharmacotherapy:

   (a) The resident can participate in simulated patient encounters in which common ED medications need to be administered.
   (b) The resident can create 50 flashcards with most common "need-to-know" medications as above (1a) but adding the most common adverse effect as well.

3. Does not consider array of drug therapy for treatment. Or, does not select appropriate agent based on mechanism of action, intended effect, and anticipate potential adverse side effects. Or, does not consider and recognize potential drug to drug interactions:

   (a) The resident can prepare an asynchronous learning presentation that highlights the most commonly administered and prescribed ED medications and their potential adverse side effects and drug to drug interactions. This presentation can be shared with the residency as an easy "go to" resource aid for resident education.
   (b) The resident can spend elective time with an ED pharmacist, if available.

Observation and reassessment (PC6)

Re-evaluates patients undergoing ED observation (and monitoring) and using appropriate data and resources, determines the differential diagnosis and, treatment plan, and disposition.

1. Does not recognize the need for patient re-evaluation:

   (a) The resident can have an added checklist of re-evaluation reminders which are then presented to the attending after the initial presentation on every patient for specified amount of time or until this is done independently.
   (b) For the resident with inadequate evaluation after sign-out, the resident can see and document a brief summary note on all sign-out patients at every shift for specified period of time, such as 5–10 shifts.

2. Does not monitor that necessary therapeutic interventions are performed during a patient's ED stay:

   (a) The attending and the resident can set a goal to engage in hourly rounds in which a checklist of tasks for the upcoming hour is determined.

3. Does not identify which patients will require observation in the ED. Or, does not evaluate effectiveness of therapies and treatments provided during observation.

Or, does not monitor patient's clinical status at timely intervals during their stay in the ED.

(a) The resident can be asked to provide hourly updates to the attending concerning the reassessment of all patients on the ED team.

4. Does not consider additional diagnosis and therapies for a patient who is under observation and change treatment plan accordingly. Or, does not identify and comply with federal and other regulatory requirements, including billing, which must be met for a patient who is under observation:

(a) The resident can document reassessment notes on all ED patients halfway through each shift.

Disposition (PC7)

Establishes and implements a comprehensive disposition plan that uses appropriate consultation resources; patient education regarding diagnosis; treatment plan; medications; and time and location specific disposition instructions.

1. Does not describe basic resources available for the care of the emergency department patient:

(a) The resident can provide a lecture or asynchronous learning presentation on the local options for discharged patients which also identifies potential barriers patients may encounter with tips for successfully improving access for the ED population.

2. Does not formulate a specific follow-up plan for common ED complaints with appropriate resource utilization:

(a) The resident can prepare templates of comprehensive discharge instructions for the 15 most common ED diagnoses.
(b) The resident can prepare a list of the most common specialty clinic for follow-up from ED patient population. The list should include contact information and average time to appointment.

3. Does not formulate and provide patient education regarding diagnosis, treatment plan, medication review, and PCP/consultant appointments for complicated patients. Or, does not involve appropriate resources (e.g., PCP, consultants, social work, PT/OT, financial aid, care coordinators) in a timely manner. Or, does not make correct decision regarding admission or discharge of patients. Or, does not correctly assign admitted patients to an appropriate level of care (ICU/Telemetry/Floor/Observation Unit).

(a) The resident can routinely accompany the nurse to discharge patients, so that he/she may become familiar with patient questions and concerns.
(b) If there is concern about the correct decision regarding admission or discharge of patients, the resident who discharges too many patients can complete additional followup logs.

4. Does not formulate sufficient admission plans or discharge instructions including future diagnostic/therapeutic interventions for ED patients. Or, does not engage patient or surrogate to effectively implement a discharge plan.

(a) The resident who admits too many patients can provide written summary of risks of hospital admission, as well as costs to the patient.
(b) The resident who discharges too many patients can be assigned reading task of inappropriate discharges. One suggestion: *Bouncebacks! Emergency Department Cases: ED Returns* by Michael B Weistock and Ryan Longstreth.

Multi-tasking (PC8)

Employs task switching in an efficient and timely manner in order to manage the ED.

1. Does not manage a single patient amidst distractions:

(a) The resident can undergo neuro-psychiatric testing to determine if there are underlying learning impediments.
(b) The attending physician can be closely involved in directing the resident's time, especially in relation to selecting patients for the resident to see and setting appropriate time limits on task completion.
(c) The attending physician can direct the resident's time towards the appropriate next task during clinical shifts in the emergency department until the resident understands and independently performs appropriate prioritization of tasks.

2. Does not task switch between different patients:

(a) The resident can round with the attending each hour to confirm appropriate prioritizing of patient tasks.
(b) The attending physician can be involved in monitoring the resident's task completion such that missed issues are promptly addressed and corrected.

(c) The resident can develop a checklist detailing major tasks for an ED course from history and physical exam to orders, documentation, applicable procedures, and disposition. This checklist can then be utilized by the resident on clinical shifts to ensure that necessary tasks are being completed in a timely fashion.

3. Does not employ task switching in an efficient and timely manner in order to manage multiple patients:

   (a) The attending physician can closely monitor the resident to determine areas of inefficiencies so that they can be addressed in a directed constructive manner, such as H&P taking, documentation, ordering, consulting, procedures.
   (b) The resident can be given a minimum number of patients to see per shift. If this number is not accomplished during normal shift time, then consider extending duration of shift time.
   (c) The resident can participate in 2 h shadowing shifts in order to learn from other residents or attending physicians how best to accomplish task management during a busy ED shift.

4. Does not employ task switching in an efficient and timely manner in order to manage the ED:

   (a) The resident can shadow a senior resident or attending physician in order to gain practical clinical knowledge by observation of appropriate behavior.

General approach to procedures (PC9)

Performs the indicated procedure on all appropriate patients (including those who are uncooperative, at the extremes of age, hemodynamically unstable and those who have multiple co-morbidities, poorly defined anatomy, high risk for pain or procedural complications, sedation requirement), takes steps to avoid potential complications, and recognizes the outcome and/or complications resulting from the procedure.

Airway management (PC10)

Performs airway management on all appropriate patients (including those who are uncooperative, at the extremes of age, hemodynamically unstable and those who have multiple co-morbidities, poorly defined anatomy, high risk for pain or procedural complications, sedation requirement), takes steps to avoid potential complications, and recognize the outcome and/or complications resulting from the procedure.

Anesthesia and acute pain management (PC11)

Provides safe acute pain management, anesthesia, and procedural sedation to patients of all ages, regardless of the clinical situation.

Other diagnostic and therapeutic procedures: goal-directed focused ultrasound (diagnostic/procedural) (PC12)

Uses goal-directed focused Ultrasound for the bedside diagnostic evaluation of emergency medical conditions and diagnoses, resuscitation of the acutely ill or injured patient, and procedural guidance.

Other diagnostic and therapeutic procedures: wound management (PC13)

Assesses and appropriately manages wounds in patients of all ages regardless of the clinical situation.

Other diagnostic and therapeutic procedures: vascular access (PC14)

Successfully obtains vascular access in patients of all ages regardless of the clinical situation.

1. Procedural skills are poor or inadequate:

   (a) The resident can spend additional time in the simulation lab, learning the components and skills necessary to perform ED procedures.
   (b) The resident's elective rotations can be tailored to address procedural deficiencies (such as critical care, anesthesia, orthopedics or ultrasound).
   (c) The resident can participate in "specialty shifts", such as ultrasound, orthopedics, and suturing to address the areas in which procedural skills are poor.
   (d) The resident can give a conference lecture in the area where a deficiency is noted (examples include "The Difficult Airway" and "Pain Management").

Medical knowledge (MK)

Demonstrates appropriate medical knowledge in the care of emergency medicine patients.

1. Does not develop and complete a self-assessment plan based on the in-training examination results. Or, does not complete objective residency training program examinations and/or assessments at an acceptable score for specific rotations:
   - (e) The chief resident or selected faculty member can assign core articles from the emergency medicine literature for the resident to summarize, which will then be posted on the asynchronous learning website as a resource for the residents.
   - (f) The resident can focus elective rotations to areas of medical knowledge deficiencies.
   - (g) The resident can prepare a lecture for the rotating medical student curriculum in conjunction with the chief resident.
   - (h) The resident can work with the conference coordinator on the development of a small group activity.
   - (i) The resident can shadow a senior resident chosen by the residency leadership in 2 h increments in order to gain practical clinical knowledge by observation of appropriate clinical behavior.
2. Does not demonstrate improvement of the percentage correct on the in-training examination or maintain an acceptable percentile ranking:
   - (a) The chief resident or selected faculty member can provide 50 essential topics for the resident to review over the course of 1 year. The resident can then create his/her own study guide for the in-service, addressing one relevant topic each week. The chief resident will review the study guides on a monthly basis to ensure appropriate progress. The study guide may also be shared on an asynchronous learning website.
   - (b) The chief resident or selected faculty member can lead boards review study sessions for the 2 months preceding the in-service exam.
3. Does not obtain a score on the annual in-training examination that indicates a high likelihood of passing the national qualifying examinations. Does not successfully complete all objective residency training program examinations or assessments. Does not pass final national licensing examination (e.g., Step 3):
   - (a) The resident can undergo evaluation with an education specialist to determine test-taking weaknesses.
   - (b) The resident can be assigned an additional ED shift each month in order to gain more experience in the clinical setting.
   - (c) The resident can undergo an extension of training time if knowledge deficits are not deemed to be corrected by the time of expected program completion.

Patient safety (SBP1)

Participates in performance improvement to optimize patient safety.

1. Does not adhere to standards for maintenance of a safe working environment. Or, does not describe medical errors and adverse events:
   - (a) The resident can identify potential patient safety concerns and create a plan to implement changes.
   - (b) The resident can lead bedside sign-out rounds of critically ill patients in the emergency department.
2. Does not routinely use basic patient safety practices such as time-outs and ‘calls for help’:
   - (a) The resident can teach other residents how to report and monitor patient safety events.
3. Does not describe patient safety concepts. Or, does not employ processes (e.g., checklists, SBAR), personnel, and technologies that optimize patient safety. Or, does not appropriately use systems resources to improve both patient care and medical knowledge:
   - (a) The resident can initiate a patient safety lecture series.
   - (b) The resident can organize “safety huddles” for the ED team, identifying areas where patient safety issues may arise.
4. Does not participate in an institutional process improvement plan to optimize ED practice and patient safety. Or, does not lead team reflection such as code debriefings, root cause analysis, or M&M to improve ED performance. Or, does not identify situations when the breakdown in teamwork or communication may contribute to medical error:
   - (a) The resident can attend hospital patient safety committee or Process Improvement meetings as an ED representative.

Systems-based management (SBP2)

Participates in strategies to improve healthcare delivery and flow. Demonstrates awareness of and responsiveness to the larger context and system of healthcare.

1. Does not describe members of ED team (e.g., nurses, technicians, and security):
   (a) The resident can make a list of all ancillary services and their contact information, including hours of service and relevant patient ratios to share with other residents and students.
2. Does not mobilize institutional resources to assist in patient care. Or, does not participate in patient satisfaction initiatives:
   (a) The resident can call five discharged patients each week for 1 month to discuss the medical care received in the emergency department and the satisfaction with their visit. The resident can then describe targeted strategies for improvement.
3. Does not practice cost-effective care. Or, does not demonstrate the ability to call effectively on other resources in the system to provide optimal health care:
   (a) The resident can be encouraged to routinely ask about patient's primary care physicians and their ability to seek care outside of the ED. If relevant to community, may create a summary of potential resources for under-insured or uninsured patients to be shared with all staff for discharge planning.
4. Does not participate in processes and logistics to improve patient flow and decrease turnaround times (e.g., rapid triage, bedside registration, Fast Tracks, bedside testing, rapid treatment units, standard protocols, and observation units). Or, does not recommend strategies by which patients' access to care can be improved. Or, does not coordinate system resources to optimize a patient's care for complicated medical situations:
   (a) The resident can spend defined amount of time with the administrative team in the emergency department to learn management strategies.
   (b) The resident can complete an administrative project targeting strategies for improving healthcare delivery and flow in the emergency department.

Technology (SBP3)

Uses technology to accomplish and document safe healthcare delivery.

1. Does not use the Electronic Health Record (EHR) to order tests, medications and document notes and respond to alerts. Or, does not review medications for patients:
   (a) The resident can take an additional introductory course in order to learn the Electronic Health Record.
   (b) The resident can discuss current patient medications during case presentation to the attending.
2. Does not ensure that medical records are complete, with attention to preventing confusion and error. Or, does not effectively and ethically use technology for patient care, medical communication, and learning:
   (a) The resident can develop sample notes/templates for given patient encounter divided by chief complaint.
   (b) The resident can have his/her notes reviewed by the senior resident or attending prior to submission with necessary modifications being addressed.
   (c) The resident can spend the afternoon with a billing specialist to review necessary billing and coding details.
   (d) The resident can be restricted from using personal email and cell phone during any emergency department shift.
   (e) The resident can prepare a medical student or resident lecture on professional behavior while on-shift as it relates to technology use.
3. Does not recognize the risk of computer shortcuts and reliance upon computer information on accurate patient care and documentation:
   (a) The resident can work with an attending who does medical-legal work to learn pitfalls of documentation and stress its importance.
4. Does not use decision support systems in EHR (as applicable in institution):
   (a) The resident can help identify all available decision support systems in the EHR and integrate one system into practice.
   (b) The resident can create a decision support system for institution's EHR that would be beneficial to other residents in the program.

Practice-based performance improvement (PBL1)

Participates in performance improvement to optimize ED function, self-learning, and patient care.

1. Does not describe basic principles of evidence-based medicine:
   (a) The resident can meet with a member of the research faculty to discuss the basic principles of evidence-based medicine. The resident can then apply these principles during the next journal club discussion.
2. Does not perform patient follow-up:
   (a) The resident can keep a follow-up log of five patients per week for a 1 month period that can then be discussed with a selected faculty member.
3. Does not perform self-assessment to identify areas for continued self-improvement and implement learning plans. Or, does not continually assess performance by evaluating feedback and assessment. Or, does not demonstrate the ability to critically appraise scientific literature and apply evidence-based medicine to improve one's individual performance:
   (a) Each week the chief resident or selected faculty member can ask a clinical question to the resident, who can then report back with the answer as well as reveal the methods in which the answer was obtained.
4. Does not apply performance improvement methodologies. Or, does not demonstrate evidence-based clinically practice and information retrieval mastery. Or, does not participate in a process improvement plan to optimize ED practice:
   (a) The resident can work with quality improvement faculty and attends QI meetings. If feasible, receives personal feedback on measures related to their ED care.

Professional values (PROF 1)

Demonstrates compassion, integrity, and respect for others as well as adherence to the ethical principles relevant to the practice of medicine.

1. Does not demonstrate behavior that conveys caring, honesty, genuine interest and tolerance when interacting with a diverse population of patients and families:
   (a) The resident can spend additional clinical time with selected faculty members who demonstrate the above attributes and can model appropriate behavior.
2. Does not demonstrate an understanding of the importance of compassion, integrity, respect, sensitivity, and responsiveness nor exhibit these attitudes consistently in common/uncomplicated situations and with diverse populations:
   (a) The resident can spend additional clinical time with selected faculty members who demonstrate the above attributes and can model appropriate behavior.
3. Does not recognize how own personal beliefs impact medical care. Or, does not consistently manage own values and beliefs to optimize relationships and medical care. Or, does not develop alternate care plans when patients' personal decisions/beliefs preclude the use of commonly accepted practices:
   (a) The resident can spend a week of elective time on the palliative care service.
   (b) The resident can meet with the chief resident or selected faculty member to discuss the importance of not letting a physician's agenda interfere with the wishes of the patient.
   (c) The resident can write a summary discussing the principles of patient competence and autonomy and post it on the asynchronous learning site.
4. Does not develop nor apply a consistent and appropriate approach to evaluating appropriate care, possible barriers and strategies to intervene that consistently prioritize the patient's best interest in all relationships and situations. Or, does not effectively analyze and manage ethical issues in complicated and challenging clinical situations.
   (a) The resident can be provided literature about the appropriate discharge of patients who are leaving the emergency department against medical advice.
   (b) The resident can attend the hospital ethics committee meetings.
   (c) The resident can initiate a conference lecture series examining difficult ethical cases.

Accountability (PROF 2)

Demonstrates accountability to patients, society, profession, and self.

1. Does not demonstrate basic professional responsibilities such as timely reporting for duty, appropriate dress/grooming, rested and read to work, delivery of patient care as a functional physician. Does not maintain patient confidentiality. Or, does not use social medical ethically and responsibly. Or, does not adhere to professional responsibilities, such as conference attendance, timely chart completion, duty hour reporting, procedure reporting:

    (a) If a resident is repeatedly late to clinical shifts, then the resident can be instructed to arrive 15 min prior to the start of each clinical shift and see at least one patient prior to the arrival of the oncoming attending. Or, the resident can be penalized one additional shift for each instance of tardiness. Or, the resident can compose a letter of apology to the attending on shift for any instance of tardiness.
    (b) If a resident routinely dresses inappropriately for clinical shifts, then a dress code can be enforced: i.e., only matched and tucked in scrub top with scrub bottom. In addition, the resident can compose a 250-word paper on appropriate professional attire.
    (c) If a resident routine calls in sick for shifts, then the resident can choose to undergo medical evaluation for an organic cause of illness or psychiatric evaluation. The resident can also payback future missed shifts on a 2:1 basis.
    (d) If a resident routinely does not complete residency tasks, then the resident can undergo medical/psychiatric evaluation and impairment screening to determine any impediments to appropriate task completion. Or, the resident can be assigned penalty shifts for uncompleted required residency tasks or lose moonlighting privileges.
    (e) If a resident routinely arrives late to or misses conference, then the resident can be assigned a penalty shift for each missed conference or lose moonlighting privileges.

2. Does not identify basic principles of physician wellness, including sleep hygiene. Or, does not consistently recognize limits of knowledge in common and frequent clinical situations and does not ask for assistance. Or, does not demonstrate knowledge of alertness management and fatigue mitigation principles:

    (a) The resident can deliver a lecture to the residency or rotating medical students about the basic principles of physician wellness, including sleep hygiene.

3. Does not consistently recognize limits of knowledge in uncommon and complicated clinical situations. Or, does not develop and implement plans for the best possible patient care. Or, does not recognize and avoid inappropriate influences of marketing and advertising:

    (a) If a resident routinely leaves clinical shifts with unfinished tasks remaining, then the resident can "re-sign out" with the oncoming resident prior to departure to ensure appropriate task completion and optimal patient care.

4. Does not form a plan to address impairment in one's self or a colleague, in a professional and confidential manner. Or, does not manage medical errors according to principles of responsibility and accountability in accordance with institutional policy:

    (a) If there is concern of impairment, then the resident can undergo impairment screening at the discretion of the program director.
    (b) If medical errors are not addressed appropriately, the resident can review the institutional policy, and how it should have and will be applied to medical errors.

Patient centered communication (ICS1)

Demonstrates interpersonal and communication skills that result in the effective exchange of information and collaboration with patients and their families.

1. Does not establish rapport with nor demonstrate empathy toward patients and their families. Or, does not listen effectively to patients and their families:

    (a) The resident can chose to read a book on patient perspective, such as *I'm Here: Compassionate Communication in Patient Care* by Marcus Engel.
    (b) The resident can review the prior 3 months of Press-Ganey (or other patient satisfaction scores) and summarize the findings.
    (c) The resident will not be deemed to have finished a shift's responsibilities until all patients are updated as to the status of their workup.

2. Does not elicit patients' reasons for seeking health care and expectations from the ED visit. Or, does not negotiate nor manage simple patient/family-related conflicts.

    (a) The resident can provide five articles that discuss a medical illness from the patient's perspective which will then be posted on the asynchronous learning website.

(b) The resident can make follow-up phone calls to all of the discharged patients within 48 h.
(c) The resident can find and discuss five articles from the popular media about common illnesses and circulating misperceptions about these illnesses.
(d) The resident can be asked to question each patient as to concerns and/or expectations about their visit, which will then become part of the presentation to the attending.

3. Does not manage the expectations of those who receive care in the ED nor use communication methods that minimize the potential for stress, conflict, and misunderstanding. Or, does not effectively communicate with vulnerable populations, including both patients at risk and their families:

    (a) The resident can meet with the chief resident or selected faculty member to discuss the importance of updating patients and their families as to a plan of care and the diagnostic results.

4. Does not use flexible communication strategies nor adjust them based on the clinical situation to resolve specific ED challenges, such as drug seeking behavior, delivering bad news, unexpected outcomes, medical errors, and high risk refusal-of-care patients:

    (a) The resident can undergo redirection of behavior by attending physician.
    (b) The resident can undergo behavior counseling and modification.

Team management (ICS2)

Leads patient-centered care teams, ensuring effective communication and mutual respect among members of the team.

1. Does not participate as a member of a patient care team:

    (a) The resident can be assigned a faculty mentor for discussions about residency structure and mentorship.
    (b) The resident can shadow a nurse or ED tech for part of day as additional shift.

2. Does not communicate pertinent information to emergency physicians and other healthcare colleagues:

    (a) The attending physician can observe interactions with consultants in order to make recommendations for future interactions.
    (b) The resident can practice sign-out rounds with the attending for 10 min prior to the end of the shift.
    (c) Following sign-out, the attending physician can demonstrate how he/she would sign-out the board in order to model appropriate behavior.
    (d) During simulation sessions, the resident can practice signing out the patients and receive constructive feedback as to how to improve the presentations.

3. Does not develop working relationships across specialties and with ancillary staff. Or, does not ensure transitions of care are accurately and efficiently communicated. Or, does not ensure clear communication and respect among team members:

    (a) The resident can participate in simulated patient encounters that require consultant interaction.
    (b) Following an off-service rotation, the resident can meet with the chief resident to discuss the rotation in hopes of gaining an appreciation for the work of the consultant.

4. Does not recommend changes in team performance as necessary for optimal efficiency. Or, does not use flexible communication strategies to resolve specific ED challenges such as difficulties with consultants and other healthcare providers. Or, does not communicate with out-of-hospital and nonmedical personnel, such as police, media, and hospital administrators.

    (a) The resident can discuss the conversation with the attending physician prior to consultant interaction in order to identify potentially difficult interactions and practice appropriate discussion.
    (b) The resident can undergo redirection of behavior by attending physician.
    (c) The resident can undergo behavior counseling and modification.

Conclusion

Emergency medicine residency programs must comply with the new ACGME milestones. Once a deficiency is identified, we hope this guide will provide helpful starting points in the remediation process. Each recommendation can be tailored to suit the needs and culture of individual residencies. We welcome all feedback and suggestions for future editions of this guide.

Compliance with ethical standards

Conflict of interest The authors declare that they have no conflict of interest.

Statement of human and animal rights This article does not contain any studies with human participants or animals performed by any of the authors.

Informed consent For this type of study formal consent is not required.

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