
SIMEDIATION: THE USE OF SIMULATION IN REMEDIATION TO DIAGNOSE, COACH, AND ASSESS STRUGGLING LEARNERS

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OBJECTIVES

1. Explain three ways simulation can be used in the process of remediating a struggling learner
2. Describe key steps to developing an effective simulation-based medical education exercise
3. Synthesize workshop content and design a sample simulation-based medical education exercise for use in the remediation of a struggling learner

AGENDA

1. Introductions
2. Definitions
3. Remediation
 - Background
 - Challenges
4. Simulation
 - Role in remediation
 - Framework for developing simulation-based exercise
5. SIMediation small group practice
6. Conclusion/wrap up

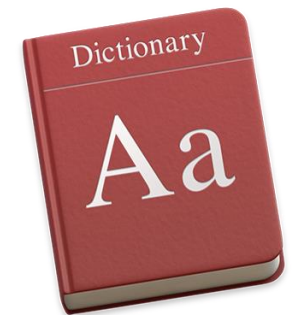
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DEFINITIONS

Simulation-Based Medical Education:

- Educational activities used to replace or amplify real patient experiences with scenarios designed to replicate real health encounters, using lifelike mannequins, physical models, standardized patients, or computers.



Remediation:

- The act of facilitating a correction for trainees who started out on the journey toward becoming a physician but have moved off course.
- A method to address and attempt to improve one or more specific deficits

SIMediation:

- The use of simulation based medical education in the process of remediating a struggling learner to help diagnosis deficits, coach learners, and/or reassess if the learner has completed the remediation process

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REMEDICATION STAGES

- Three main elements:
 1. Diagnosis:
 - Identifying the need or deficit to be addressed and framing it in terms of required learning or performance goals
 2. Coaching:
 - Developing and executing a series of defined and officially sanctioned episodes of additional training and monitoring
 3. Reassessment:
 - Concluding with an assessment of whether the learner has met the predetermined remediation goals

REMEDICATION PREVALENCE

- Approximately 4.4%-7% of residents in emergency medicine and internal medicine
- Tremendous variability within and between programs, with some reporting up to 39% prevalence of “problem residents”
- Limited data on prevalence in pediatrics
- “Informal” remediation and “learning plans”

IDENTIFICATION OF “PROBLEM RESIDENTS”

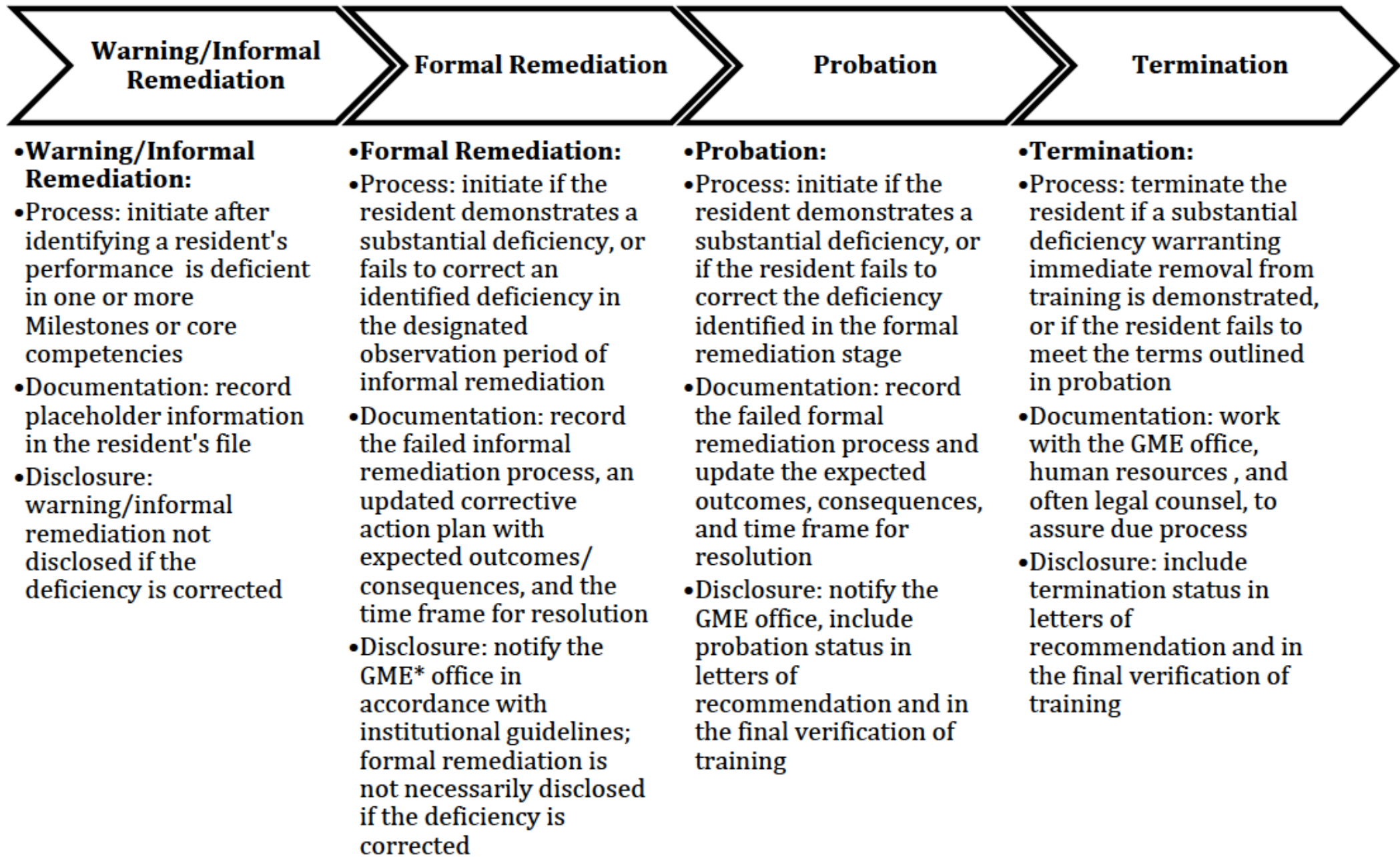
- Application materials rarely help PDs identify individuals at risk for remediation during residency
- Performance deficiencies were rarely self-identified by residents (5.6%)
- 83% of performance difficulties noted in the inpatient setting
- 32% identified in continuity clinics
- Most commonly identified by faculty (69.5%), supervising residents (62.9%), and peers (52.8%)
- Contributing factors:
 - depression, anxiety, personality disorders (32.6%)
 - learning disability (6.6%)
 - illness, substance abuse, divorce (<5%)

CHARACTERISTICS OF REMEDIATING TRAINEES

- Often have more than one deficit
 - Medical knowledge, clinical reasoning and professionalism most common
- Professionalism problems increased with increasing training level
- Men struggled more with communication and mental well-being than women
- Poor professionalism is the only predictor of probationary status
- Each additional hour of faculty time decreased the odds of probation by 3.1%
- Mean number of faculty hours per remediating resident: 19.8; fellow: 15.7
- 90% of remediating trainees successfully completed remediation

Guerrasio J. Learner Deficits and Academic Outcomes of Medical Students, Residents, Fellows and Attending Physicians Referred to a Remediation Program, 2006-2012. Academic Medicine, 2014.

Figure. Remediation schema for residents at risk of not meeting educational milestones during their training.



REMEDIATION CHALLENGES

Small Group Discussion

- What are the biggest challenges you encounter in remediation?
 - How could simulation help overcome those challenge
-
- *5 minutes to discuss with small group*
 - *Brainstorm ideas and write on flipchart*
 - *During large group report out, each table will report their top 2 answers that haven't previously been stated*



Barrier to successful remediation:

- Lack of sufficient details to diagnose a learner's deficits
- Lack of sufficient documentation to support the need for remediation
- Lack of learner buy-in
- Logistical challenges that limit direct observation of learners (working nights, unpredictable occurrence of events of interest,, non-clinical rotations)
- Need to balance education with patient safety
- Challenging to know when learner has successfully completed remediation
- Lack of knowledge can make it difficult to know if resident also has a clinical reasoning problem

How simulation can help:

- Observe learner in a modifiable situation to assess performance in key areas of interest
- Incorporate checklists and assessment tools to document performance during scenarios
- Gather examples from observation to share with learner
- Show video of performance to illustrate points
- Develop scenarios based on input from learner about areas of interest/challenge
- Recreate clinical experiences at set times/locations based on learner and faculty availability
- Practice in a safe environment separate from patient care
- Repeat observations of performance in key situations to assess for progress
- Learner can review medical knowledge ahead of time, so the simulation session is truly testing clinical reasoning

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ROLE OF SIMULATION WITHIN REMEDATION STAGES

- Diagnosis
- Coaching
- Re-assessment

Hauer K, et al. Remediation of the Deficiencies of Physicians Across the Continuum From Medical School to Practice: A Thematic Review of the Literature. Acad Med, 2009.

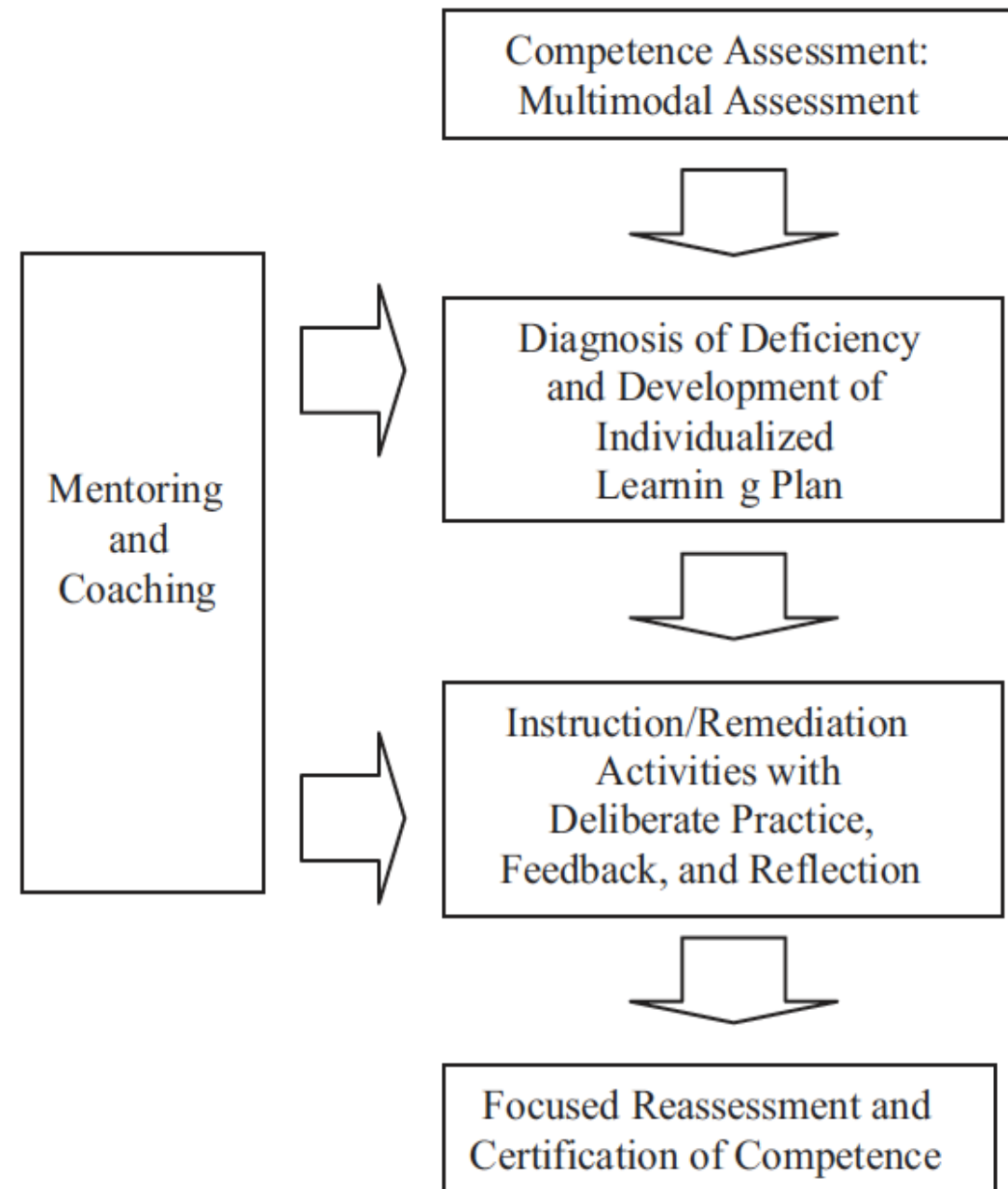


Figure 1 Proposed model of a program for remediation of performance deficits of medical trainees and practicing physicians.

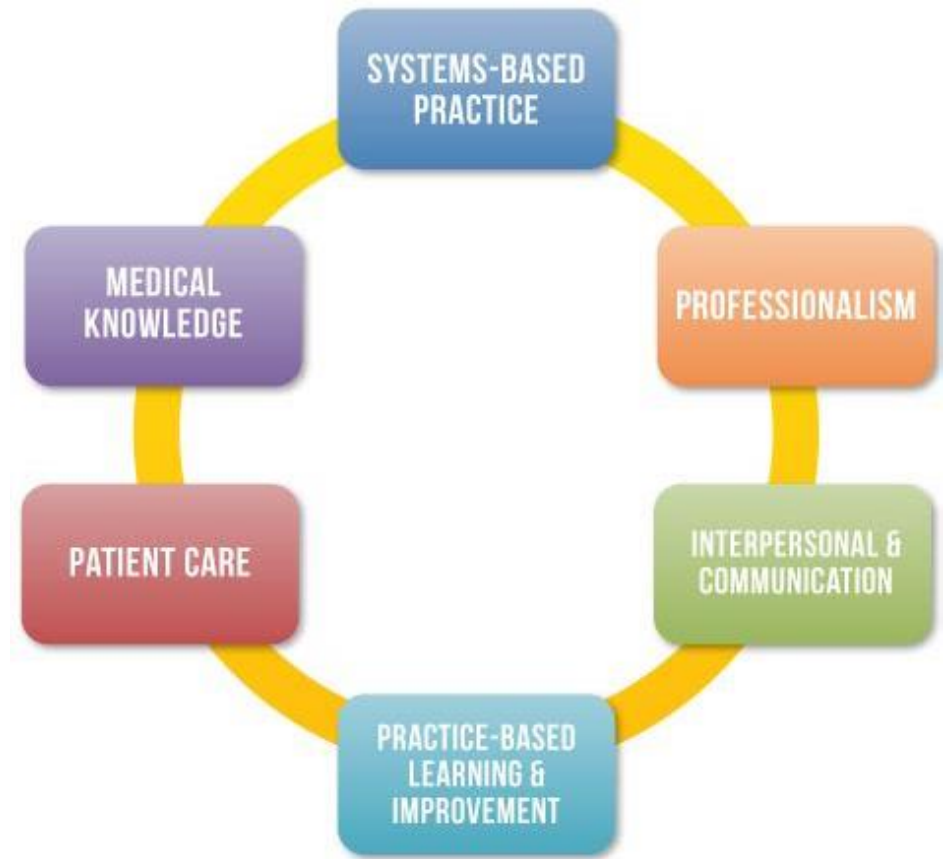
DIAGNOSIS: IDENTIFY PERFORMANCE DEFICIT

- Goal
 - Identifying the need or deficit to be addressed and framing it in terms of required learning or performance goals
 - Earlier detection is ideal and input can be multi-modal
- Role of simulation
 - Provides observed, *modifiable* scenarios to determine what deficits are present



DIAGNOSIS: COMPETENCY-BASED

- Patient care
 - Clinical Skills (including procedural skills)
 - Clinical Reasoning (data collection, assessment)
 - Organization & Time Management
- Interpersonal and communication skills
- Medical knowledge
- Professionalism
- Systems-based practice
- Practice-based learning and improvement
- Mental health/burnout



**Those marked in red can best utilize simulation

COACHING: INTERVENTION

- Goal
 - Develop and execute a series of defined, officially sanctioned episodes of additional training and monitoring
- Role of simulation
 - Create predictable, safe, and modifiable environment that can be tailored to the specific deficiencies identified
 - **Does NOT impact direct patient care or safety**
 - **Can be adjusted over time**
 - Allows for direct observation → reflection → feedback
 - Videotaping can help with tracking progress, learners that lack insight
 - Provides the time and space to cultivate deliberate practice
 - Focused attention with specific goal of improving performance
 - Can allow for pause and continue or repeated deliberate practice



RE-ASSESSMENT

- Goal
 - Concluding with an assessment of whether the learner has met the predetermined remediation goals
- Role of simulation
 - Allows for the creation of tailored scenarios to assess specific areas of interest in flexible timeframe
 - Able to incorporate checklists and assessment tools for objective assessments and documentation



HOW IS SIMULATION IN REMEDIATION UNIQUE?

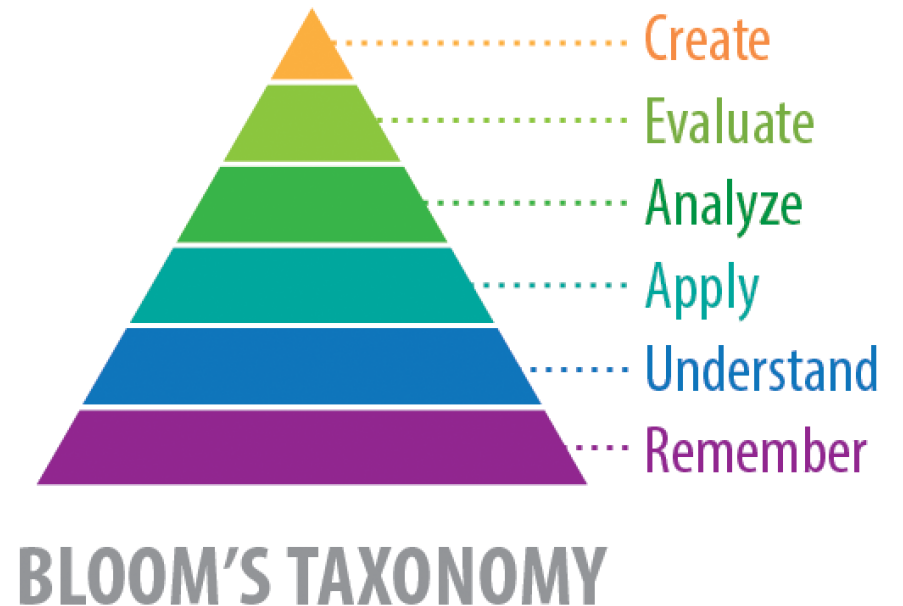
- Higher stakes (“not just for fun”)
 - Re-assessment: observations are used to help determine competency and potentially next steps in remediation process
 - Should be made explicit to learner
- What happens in SIMediation doesn't all stay in SIMediation
 - Confidentiality: important to determine guidelines with residency program director and those involved in remediation process
 - *Variability by institutions

SIMULATION EXERCISE FRAMEWORK BASICS

- Orientation or pre-brief
 - Clinical scenario
 - Debrief/Documentation
- General Rule when making decisions: What are the learner's needs? What are the program's needs?

SIMULATION EXERCISE ORIENTATION (OR PRE-BRIEF)

- Set the stage with goals and objectives
 - Remediation stage and competency being addressed
 - Educational objectives (Blooms Taxonomy)
- Discuss ground rules
 - Confidentiality
 - Acknowledgement of simulated environment
 - Commitment to safe, supportive learning environment



SIMULATION EXERCISE CLINICAL SCENARIO

- Logistics
 - Time – scheduling, preparation including training, actual session, debrief
 - Modality – standardized patients, high vs low fidelity
 - Equipment – mannequins, trainers, supplies
 - Personnel – facilitator, standardized patient, simulationist, technical support
 - Location – in situ vs simulation lab, proximity and availability of space for your level of learner, capabilities of facilities
 - Cost – especially important if doing a session for one learner
- Case
 - Level of detail needed depends on situation
 - Use template to start, adapt as needed. Many published cases available
 - Build in saves and alternative paths

SIMULATION SESSION DEBRIEF + DOCUMENTATION

- Multiple models for debriefing
 - Facilitator-only vs. video-assisted review
 - Learner reflection on performance
 - Strengths
 - Areas for improvement
 - Plan for continual progress
 - Facilitator observations
- Documentation
 - Consider confidentiality
 - Report back to program leadership



SIMEDIATION EXAMPLE

REMEDIATION STAGE: DIAGNOSIS AND RE-ASSESSMENT

- As intern, completed remediation for Communication and Organizational Skills
- Early in senior year “struggling”
 - Used 6 simulations to refine areas of deficiencies in:
 - Communication Skills
 - Organizational Skills
 - Fund of Pediatric Knowledge
 - Placed on probation for deficiencies in core pediatric knowledge and clinical decision making
 - Mentored Study Program
 - Coaching
 - Simulation as part of conclusion of probation

Helped identify more specific issues to target;
strengths and weaknesses highlighted

SIMEDIATION EXAMPLE


REMEDICATION STAGE: DIAGNOSIS AND RE-ASSESSMENT

SIMEDIATION EXAMPLE

REMEDICATION STAGE: COACHING

- Formal remediation begun early January in competencies:
 - Patient Care
 - Medical Knowledge
- Remediation included
 - Case-based discussions
 - Simulated patients
 - Directly observed patient encounters by advisor
- Remediation extended, probation, ultimately left program

Confirmed highly variable application of
medical knowledge;
gaps in medical knowledge



SIMEDIATION EXAMPLE

REMEDICATION STAGE: COACHING

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SMALL GROUP PRACTICE

- Each group will be assigned a competency-based deficit. Sample cases will be provided or groups can use an example from their own experience related to that deficit.
- Using the framework provided during this session and the templates at your table, develop a simulation-based medical education scenario that could be used in that learner's remediation plan.
- There will be 15 minutes for small group work.
- Groups will then report out to the large group a brief summary of their scenario

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TOOLKIT



TAKE HOME POINTS



QUESTIONS?