SIMEDIATION:
The Use of Simulation in Remediation to Diagnose, Coach, and Assess Struggling Learners

Medical College of Wisconsin Affiliated Hospitals, Milwaukee, WI
Amanda Rogers, MD
Abigail Schuh, MD
Michael Weisgerber, MD

Medical College of Georgia, Augusta, GA
Renuka Mehta, MD

Stanford University, Stanford, CA
Rebecca Blankenburg, MD
Sarah Hilgenberg, MD
Caroline Rassbach, MD
LaHia Yemane, MD

Johns Hopkins All Children’s Hospital, St Petersburg, FL
Kimberly Collins, MD

Massachusetts General Hospital, Boston, MA
Ariel Frey-Vogel, MD
Shannon Scott-Vernaglia, MD
Katherine Sparger, MD

Hofstra Northwell School of Medicine at Cohen Children’s Medical Center, New Hyde Park, NY:
Dipti Mirchandani-Shah, MD

McGaw Medical Center of Northwestern University, Chicago, IL
Karen Mangold, MD

University of Alabama Medical Center, Birmingham, AL
Nancy Tofil, MD
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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REMEDIATION 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
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

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

**Warning/Informal Remediation:**
- Process: initiate after identifying a resident's performance is deficient in one or more Milestones or core competencies
- Documentation: record placeholder information in the resident's file
- Disclosure: warning/informal remediation not disclosed if the deficiency is corrected

**Formal Remediation:**
- Process: initiate if the resident demonstrates a substantial deficiency, or fails to correct an identified deficiency in the designated observation period of informal remediation
- Documentation: record the failed informal remediation process, an updated corrective action plan with expected outcomes/consequences, and the timeframe for resolution
- Disclosure: notify the GME* office in accordance with institutional guidelines; formal remediation is not necessarily disclosed if the deficiency is corrected

**Probation:**
- Process: initiate if the resident demonstrates a substantial deficiency, or if the resident fails to correct the deficiency identified in the formal remediation stage
- Documentation: record the failed formal remediation process and update the expected outcomes, consequences, and time frame for resolution
- Disclosure: notify the GME office, include probation status in letters of recommendation and in the final verification of training

**Termination:**
- Process: terminate the resident if a substantial deficiency warranting immediate removal from training is demonstrated, or if the resident fails to meet the terms outlined in probation
- Documentation: work with the GME office, human resources, and often legal counsel, to assure due process
- Disclosure: include termination status in letters of recommendation and in the final verification of training

REMEDIATION CHALLENGES

Small Group Discussion

- What are the biggest challenges you encounter in remediation?
- How could simulation help overcome those challenges

- 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
<table>
<thead>
<tr>
<th>Barrier to successful remediation:</th>
<th>How simulation can help:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lack of sufficient details to diagnose a learner’s deficits</td>
<td>Observe learner in a modifiable situation to assess performance in key areas of interest</td>
</tr>
<tr>
<td>Lack of sufficient documentation to support the need for remediation</td>
<td>Incorporate checklists and assessment tools to document performance during scenarios</td>
</tr>
<tr>
<td>Lack of learner buy-in</td>
<td>Gather examples from observation to share with learner</td>
</tr>
<tr>
<td></td>
<td>Show video of performance to illustrate points</td>
</tr>
<tr>
<td></td>
<td>Develop scenarios based on input from learner about areas of interest/challenge</td>
</tr>
<tr>
<td>Logistical challenges that limit direct observation of learners (working nights, unpredictable occurrence of events of interest, non-clinical rotations)</td>
<td>Recreate clinical experiences at set times/locations based on learner and faculty availability</td>
</tr>
<tr>
<td>Need to balance education with patient safety</td>
<td>Practice in a safe environment separate from patient care</td>
</tr>
<tr>
<td>Challenging to know when learner has successfully completed remediation</td>
<td>Repeat observations of performance in key situations to assess for progress</td>
</tr>
<tr>
<td>Lack of knowledge can make it difficult to know if resident also has a clinical reasoning problem</td>
<td>Learner can review medical knowledge ahead of time, so the simulation session is truly testing clinical reasoning</td>
</tr>
</tbody>
</table>
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ROLE OF SIMULATION WITHIN REMEDIATION STAGES

- Diagnosis
- Coaching
- Re-assessment

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**
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?
Set the stage with goals and objectives
- Remediation stage and competency being addressed
- Educational objectives (Bloom’s 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
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
REMEDIATION STAGE: DIAGNOSIS AND RE-ASSESSMENT
SIMEDIATION EXAMPLE
REMEDIATION 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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QUESTIONS?