Remediation of Basic Science in Integrated Blocks

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Objectives

- Define remediation
- Understand the unique challenges of medical students
- Identify tools to improve your comfort and ability to provide remedial support
- Review remediation models at two institutions

Disclosures

Dr. Guerrasio
Book Royalties

Dr. Bonaminio
Nothing to disclose

Remediation

- Students who require more than the standard curriculum to achieve academic success and sustained professional competency.

Identification of Learner

Diagnose the Area(s) of Deficiency

Identify the Greatest Deficit

Build a Remediation Strategy

Unbiased Reassessment

Model for Remediation


Remediation Strategy

Deliberate Practice

Feedback

Reflection in Action
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### Underperforming Learners
**WEAKNESSES**
- Lack scaffolding to learning
- Don’t learn from the hidden curriculum
- Trouble identifying feedback
- Can actualize feedback

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### Mismatch

<table>
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<th>Teaching</th>
<th>Learning</th>
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<td>1. Educational Task</td>
<td>1. Learner’s Competence</td>
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<td>3. Unconscious/Abstract Learning</td>
<td>3. Need for Concrete Learning</td>
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<td>5. Safe Learning Environment</td>
<td>5. Fear of Ridicule</td>
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### Underperforming Learners
**STRENGTHS**
- Are teachable
- Have foundational knowledge
- Great memorizers
- Learn from concrete rather than abstract

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### Proactive Response to Risk Factors
- Risk Factors for poor USMLE Step 1 performance (characteristics)
  - Clinical courses <75%
  - Lower MCAT total and verbal scores
  - Sat for the MCAT more times
  - Delays in USMLE Step 1
  - State and federal assistance
  - URM status
  - Age at matriculation (>30yo)

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**Study Skills Course**
- EdD: helps post bacc students identify risks through a learning survey
- Boot camp just prior to medical school
- At orientation:
  - Risk factors
  - Self assessment to recognize strengths and vulnerabilities
  - Seeking help early

**Meeting with Course Directors**
- Required for failures
- Recommended for borderline performance

**Director Checklist**
1. Meet face to face with each student
2. Review the exam in person with the student and discuss missed questions
3. If possible, probe/identify holes in study approach or style with these questions

4. Remind student: they received an email from Student Affairs
5. Document the discussion of these steps.
6. Schedule follow up appointment if appropriate

**Key Struggles and Strategies**
- “There is too much material to learn.”
- Pre-read material
- Focus on objectives
- Know key concepts
### Key Struggles and Strategies

**“I’m studying for hours, but I can’t seem to remember the material.”**
- Active learning
- Practice recall
- Understand rather than memorize

**“I am easily distracted”**
- Self care - sleep, meals, exercise
- Best time of day
- Active learning
  - Maintain focus better with questions than reading

**“Where should I study?”**
- Limited distraction
- Take practice tests/questions in an environment that simulates the testing environment

**“Should I do practice questions?”**
- Reinforce retention by applying the knowledge
- Topics first, then random
- How many?

**“What do I do if I get a question wrong?”**
- Understand the question
- Make any assumptions?
- Identify the middle step
- What would the question have to say…
- Key point

**“I can narrow the answer down to 2 choices… and then I pick the wrong answer.”**
- Lacks specificity of knowledge
Key Struggles and Strategies

- “The grading histogram from the failed exam shows that I score poorly on all topics and sections.”
- Needs to acquire better test taking skills.

Key Struggles and Strategies

- “I would do better if I have enough time to finish the questions on the test.”
- Have a consistent approach to answering questions
- Practice larger blocks of questions
- Learn to manage the clock during the exam

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About Us – KU SOM

211 students

175 Kansas City
28 Wichita
8 Salina

Legacy Curriculum

12 integrated foundational science modules

Phase I: Year One

- Foundations of Medicine
- Genetics and Neoplasia
- Inflammation and Immunity
- Cardiovascular
- Renal and Endocrine
- Gastrointestinal Tract and Nutrition
- Reproduction and Sexuality

Phase I: Year Two

- Musculoskeletal and Soft Tissue
- Brain and Behavior
- Infectious and Parasitic Diseases
- Blood and Lymph

Integration and Consolidation

Remediate a Course(s)

1 module week ➞ 1 credit
Remediate (summer) ➞ up to 8 credits

Remediate a Course(s)

- **Summer**
  - 4-week module
  - 6-8 week module

- **Learning Activities**
  - Self-study
  - Assignments
  - Labs
  - Quizzes
  - Assessment
  - MCQ exam
  - Lab exam
  - Meet with module director

**Tuition**

Two-Test System

- **Module MCQ exams**
  - Take 1
    - 100 items
    - 2 days
  - Take 2
    - 100 items

- **Test**
  - Every 4 weeks
  - Items are not the same on the two exams
  - Must take at least one exam
  - Higher of the two scores used in final grade

Repeat the Year

- **Office of Student Affairs**
- **Academic and Professionalism Committee**

- **Fail >8 credits**
  - Dismissal
  - Leave of Absence
  - NET

- **Not Evaluated Track - NET**

- **Office of Student Affairs**

- **Enrolled**
  - "audit" remaining modules in fall and spring semesters

- **Grade**
  - Credit

- **Must complete**
  - all learning activities and assessments (min 60% on exams)

- **Required**
  - meet with Learning Specialist

- **Required**
  - meet with Psychologist

- **Tuition**

ACE Curriculum (July, 2017)

- **9 integrated foundational blocks**

ACE Curriculum

- **9-week block**
  - 8 weeks of instruction

- **1 week of scholarship, enrichment & remediation**

- **In-line remediation**
  - **Week 9**

http://www.kumc.edu/school-of-medicine/education/ace-curriculum/the-curriculum.html
ACE Remediation

**Block MCQ exams**

- Week 2, 4, 6, 8
- 50 item exams

**Items** ➔ on the two exams
Retake up to 3 of the 4 exams
Fail all 4 exams ➔ fail block

ACE Repeat the Year

**Office of Student Affairs**

Academic and Professionalism Committee

- Fail 1 Block ➔ Dismissal
- Leave of Absence
- NET

Outcomes

**Entering classes 2006-2013**

- 1411 students
- 7% remediated at least 1 module
- 4% repeated the year

Repeat < Remediate < Regular
MCAT Sum, Undergrad GPA (Science and Cumulative)
Repeat, Remediate < Regular
Phase I GPA, Phase II GPA
Step 1 Score and Passing %
Step 2 CK Score and Passing %

Outcomes

**Entering classes 2006-2011**

Graduated in 4 years
Repeat (0%) < Remediate (65%), Regular (94%)

Graduated in 5 years
Repeat (33%) < Remediate (93%), Regular (98%)

Graduated in 6 years
Repeat (49%) < Remediate (96%), Regular (98%)

U. CO Case Example

- **Weekly Meeting:**
  - Student Affairs Deans
  - Educational Psychologist
  - Remediation Specialist
  - Support Staff
    - Director of Student Affairs
    - Administrator
  - Identification of students with failing and borderline test scores
U. CO Case Example

- “Maria”
  - MS1, has failed the first two exams of the Blood and Lymph course.
  - Reviewing past performance
  - Failed anatomy and completed remediation over the winter break
  - Was offered a tutor
  - MCAT scores low
  - Less rigorous undergraduate college
  - Learned English at age 8

Available resources:
- Meeting with the course director
- Peer tutoring
- QUAR groups
- Meetings with Educational Psychologist or Remediation Specialist
- Mental health evaluation and support
- Neuropsychiatric testing ($)

U. CO Case Example

- Maria reveals that she has become depressed and anxious
  - Meets with a psychiatrist
  - Meets with the educational psychologist
  - Reviews areas of weakness (studying and test taking)
  - Better understands expectations
  - Implements strategies for improvement
  - Reviews subsequent test performance, identifying new strategies for learning

U. CO Case Example

- Maria exam performances slowly begins to rise
  - No longer failing tests
  - Now is consistently out of the “danger zone”
  - Establishes a study plan for the summer between 1st and 2nd year
  - Continues to work with educational psychologist through 2nd year
  - Joins a QUAR group
  - Takes a CBSSA practice exam taken in December of 2nd year

Thank You

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