A Multifaceted Approach to Enhancing Medical Knowledge and Improving Board Examination Scores.

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A Multifaceted Approach to Enhancing Medical Knowledge and Improving Board Examination Scores

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Idea
• Use evidence-based techniques, both distributed practice and practice tests, coupled with a supportive environment to help residents build their knowledge base.

Rationale
• Problem:
  - Residents have had lower than average pass rates on the ABFM exam 2010-2013, several key content areas were identified.

• Facts:
  - ITE exam performance is a proven indicator of success on the ABFM board exam; both are indicators of medical knowledge.¹
  - Learners who have developed metacognitive skills, have an awareness of their study needs and skills and are more likely to be successful in passing board exams.

• Keys to a potential solution:
  - Educational literature points to proven techniques that improve knowledge acquisition.²
    - use of practice tests
    - distributed practice
  - An intervention using email based practice tests demonstrated that residents who participated in practice tests improved ITE exam performance.³
  - Creation of a collaborative environment which supports positive relationships, builds competence and encourages increasing autonomy

Methods
Voluntary participation for residents, N=18. Three pronged intervention.

1 Metacognitive Skills - Enhancing the environment through counseling on study skills.
   - Done semiannually at resident, faculty, advisor meetings

2 Practice Testing - Pre and post testing for selected content with didactic sessions.
   - Coordinated with individual faculty who lead various aspects of curriculum
   - Pre testing in form of open ended questions
   - Post testing board style

3 Distributed Practice - Email based testing on key content areas accompanied by follow response from faculty.
   - 10 Board Review questions monthly
   - Response email with answers, suggesting reading, encouragement

Evaluation
• Baseline survey of independent study activities
• Longitudinal tracking of participation in each of three prongs
• After 6 months, survey of each resident for study activities and for qualitative feedback on program
• Annual review of ITE exams so that intervention can be modified to meet learner needs
• ABFM pass rates tracked over three year period

Impact on the Field
• If effective, this intervention could be a model for other programs which seek to enhance medical knowledge acquisition in their residents by encouraging adult independent learning.