Using the Master Adaptive Learning Model to Develop Curriculum that Enhances Evidenced-Based Practice
Background

• The Master Adaptive Learner (MAL) Framework – 2018

“Master Adaptive Learners utilize a metacognitive approach to self-regulated learning that leads to the development and demonstration of adaptive expertise.”

The Mind of a Master Adaptive Learner

But, MAL curricula have not been evaluated
Aims

1. Perform gap analysis - 2 FM Residency programs’ readiness for MAL
2. Present curriculum changes to address curricular gaps
Methods

• 3 educators from 2 LVHN FM residency programs
  • Reviewed prior evidence that residents are not performing as MALs
• Compare curriculum to MAL Model
  • What are we covering?
  • What is missing?
• Implement curriculum changes to address gaps
• Qualitative analysis of resident-written statements
Results – Gap Analysis

- Lack of dedicated time to formally teach the principles of EBHC
- Minimal faculty development about the MAL framework
  - Necessary to shift the learning environment to encourage MAL behaviors
- Process of resident self-assessment/goal setting lacked expectations of specific goals to develop measurable individualized education plans

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• Active critical appraisal exercise sessions (“PICO”)
• Addition of Journal Club
• Case-based faculty development re: MAL
• Resident Assessment Facilitation Teams (RAFTs) w/ SMART goals

### Results – Qualitative Analysis

<table>
<thead>
<tr>
<th>MAL Phases/Characteristics Seen in RAFT Statements by Training Level</th>
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</thead>
<tbody>
<tr>
<td>Planning</td>
</tr>
<tr>
<td>First Year Initial RAFT (N=18)</td>
</tr>
<tr>
<td>37.3%</td>
</tr>
<tr>
<td>First Year End of Year (N=15)</td>
</tr>
<tr>
<td>33.3%</td>
</tr>
<tr>
<td>Second Year End of Year (N=15)</td>
</tr>
<tr>
<td>37.0%</td>
</tr>
<tr>
<td>Third Year End of Year (N=13)</td>
</tr>
<tr>
<td>26.2%</td>
</tr>
</tbody>
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Limitations

• Educational case study w/ qualitative analysis
  • May not be generalizable

• Outcomes remain difficult to measure
Conclusions

• **MAL framework** - a useful description of key component of EBHC
• Learning environment requires revision - **faculty development**
• At 2 FM residencies, implementation of:
  • Didactic sessions
  • Informed self-assessment
  • Case-based faculty development
  ... led to an increased in **MAL behaviors** when goal setting

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Dreyfus Model w/ Adaptive Learning

Cutrer et al. The Master Adaptive Learner. Elsevier. 2020
Master Adaptive Learners

• Think about how they learn (Metacognition)
  • Critical thinking
  • Reflection
• Self-monitoring (and self-regulation)
• Develop adaptive expertise
Resident Assessment Facilitation Team (RAFT)

• Our model to involve residents in their own competency assessment

• Key components of the RAFT process:
  • Residents perform a self-assessment (*planning, assessing, adjusting*)
  • Meet with a trusted advisor & discuss self-assessment in context of the feedback from their 360 evaluations (*planning, assessing*)
    • Develop a shared proposal for residents’ milestones assessment
  • Meet with the CCC, which we call the RAFT team (*assessing, adjusting*)
  • Residents share key plans/ needs with whole community (*planning, assessing, adjusting*)
The RAFT Process – RAFT Statement

Purpose:
• Give educational supervisors information about progress & learning goals discussed @ RAFT
• This info used to customize education and help meet goals

Expectations:
• Due one week after RAFT
• Sent to faculty and senior residents (others may be included by request)

Guidelines:
• Summary statement of progress from the last RAFT period
• List your goals for the next RAFT period
• Format at discretion of resident (can include but are not limited to prose, lists, drawings, and animation)
Coaching – A novel concept for med ed

• Change in focus to guiding the learning process
• Not just teaching / review of progress
  • Assessing knowledge gaps
  • Encouraging active learning, assist prioritization

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