**Without Face-to-Face Limits**

Using Online Modules to Expand Specialty Focused Residency EBM Instruction for the ACGME Milestone Project

Kathleen A. McGraw, MLS¹, Sarah Towner Wright, MLS¹, Karen Crowell, MLIS¹, Susan M. Martinelli, MD²

---

**ACGME Background**

Accreditation Council for Graduate Medical Education (ACGME) Milestone Project

- Are competency-based developmental outcomes that can be demonstrated progressively by residents and fellows.
- Provide a rich descriptive framework for defining clinical competency.
- Guide curriculum development.
- Support better self-directed assessment and learning.
- Each specialty develops a detailed Milestone framework based on ACGME’s 6 core competencies.
- Evidence Based Medicine (EBM) Milestones included in the Practice-based Learning and Improvement competency.

---

**Modules Developed**

**EBM Review and Practice:**

- Asking Questions and Acquiring Evidence
  - for Anesthesiology Residents
  - for Surgical Residents
  - for Pediatrics Residents
  - for Obstetrics & Gynecology Residents
  - for General Medical Residents
  
  [guides.lib.unc.edu/medicalresidents](http://guides.lib.unc.edu/medicalresidents)

---

**Author Affiliations**

University of North Carolina at Chapel Hill

¹ Health Sciences Library

² Department of Anesthesiology

This project is funded by a North Carolina 2014-2015 EZ Innovation Grant and a UNC Libraries Innovation Grant.

---

**Objectives**

- Extend current staff capacity for milestone focused EBM instruction by creating online module templates that can be adapted to meet the specific needs of more residency programs.
- Test effectiveness, quality and usability of sample modules.

---

**Methods**

Online templates were developed in LibGuides v.2. Content was modeled on the 2014 face-to-face EBM instruction session for the Clinical Base Year anesthesiology residents.

LibSurveys was used to integrate a pre-test and post-test with 5 knowledge and 2 self-perception questions.

The pre-test and post-test were completed by 10 residents in the anesthesiology session to provide baseline data to compare with future online-only learners.

These residents were asked to review the online version of the instruction and answer a brief survey about ease of use and preferred learning mode.

---

**Baseline Pre to Post Results**

7 of 10 clinical base year anesthesiology residents had improved scores on five questions designed to test knowledge change after face-to-face EBM instruction.

---

**Survey Question:** What is your comfort level in completing an EBM search in PubMed?

<table>
<thead>
<tr>
<th>#</th>
<th>Pre-Test</th>
<th>Post-Test</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Not very comfortable</td>
<td>Somewhat comfortable</td>
</tr>
<tr>
<td>5</td>
<td>Somewhat comfortable</td>
<td>Very comfortable</td>
</tr>
<tr>
<td>2</td>
<td>Somewhat comfortable</td>
<td>Very comfortable</td>
</tr>
<tr>
<td>1</td>
<td>Very comfortable</td>
<td>Very comfortable</td>
</tr>
</tbody>
</table>

---

**Preliminary Feedback**

7 clinical base year anesthesiology residents completed the feedback survey. All found the module easy to understand and clearly organized.

Chart shows the distribution of answers to the statement:

"I would prefer to learn and practice these skills in a group session with an instructor."

---

**Discussion & Next Steps**

- The number of participants providing baseline information is small and resulting information must be used cautiously.
- Pre/post test data suggest that knowledge about searching and self-perceived comfort can be improved through these tailored instructions.
- Survey responses suggest that learning style preferences are varied.
- Face-to-face instruction is still preferred by some. Well-designed online materials provide an option for learners who prefer that format and for those unable to attend a class.
- Positive feedback on ease of use confirms that the template is adequate.
- Library school students will conduct a more structured evaluation of the modules.
- Promotion of the modules will be needed.