

# Mapping the Competencies

## ACRL's Information Literacy Framework to Core EPAs and ACGME Common Program Requirements

### Background

The recent (2014) formulation and roll out of Core Entrustable Professional Activities (EPAs) by the AAMC, competencies that beginning residents are expected to be proficient in, has prompted medical schools to assess how well their curricula prepare medical students to meet this expectation. Two EPAs in particular are about forming clinical questions, retrieving evidence, evaluating the relevance and strength of knowledge, guidelines, etc. This presents a direct opportunity for health sciences libraries to be involved in the medical education curriculum.

Many AAHSL libraries are actively engaged in a variety of ways with evidence-based components of the medical education curriculum, both at the undergraduate and graduate levels.

### Objectives

To aid librarians in advocacy and instruction, the Association of Academic Health Sciences Libraries (AAHSL) task force on competency-based medical education (CBME) was asked to map medical education competencies to the ACRL Framework for Information Literacy. The benefits of such a map could be:

- Identify the ways in which the library framework related to primary teaching objectives and competencies for undergraduate and graduate medical education
- Identify gaps in undergraduate and graduate medical education standards that are potentially better delineated in the ACRL Framework
- Identify opportunities for library engagement
- Provide medical education-specific language that librarians can use to advocate for their own involvement in teaching information literacy and evidence-based practice concepts

### Methods

- Identified relevant competencies for undergraduate and graduate medical education. We selected the Core EPAs and the ACGME Program Requirements.
  - While the new ACGME milestones identify relevant EBM competencies in the Practice-based Learning and Improvement domain, milestones are different for every ACGME program. We therefore selected the broader ACGME Program Requirements, which are common to all ACGME residency programs.
  - Within the EPAs, we selected 7, 9 and 13 for analysis.
  - Within the ACGME Common Program Requirements, we selected all requirements for analysis.
- A core team of four librarians individually mapped the relevant Core EPAs and the ACGME Program Requirements to the ACRL Framework.
- Using a consensus-building methodology based on the Nominal Group Technique, librarians met weekly to discuss their mapped items. Whole group consensus was sought for each item and decisions were discussed until consensus was achieved.

### Mapping Examples From Each ACRL Frame

ACRL Knowledge Practice	EPA # and Function	ACGME Core Competency and Common Requirement
<b>ACRL Frame: Authority is Constructed and Contextual (A)</b>		
A-2: Use research tools and indicators of authority to determine the credibility of sources, understanding the elements that might temper this credibility.	7-2: Demonstrate basic awareness and early skills in appraisal of both the sources and content of medical information using accepted criteria.	IV.A.5.c: Residents must demonstrate the ability to investigate and evaluate their care of patients, to appraise and assimilate scientific evidence, and to continuously improve patient care based on constant self-evaluation and life-long learning. (Practice-Based Learning and Improvement)
<b>ACRL Frame: Information Creation as Process (IC)</b>		
IC-7: Transfer knowledge of capabilities and constraints to new types of information products.	7-3: Identify and demonstrate the use of information technology to access accurate and reliable online medical information.	n/a
<b>ACRL Frame: Information has Value (V)</b>		
V-1: Give credit to the original ideas of others through proper attributions and citation.	9-2: Establish and maintain a climate of mutual respect, dignity, integrity, and trust.  9-3: Communicate with respect for and appreciation of team members and include them in all relevant information exchange.	IV.A.5.e. Residents must demonstrate a commitment to carrying out professional responsibilities and an adherence to ethical principles. (Professionalism)
V-2: Understand that intellectual property is a legal and social construct that varies by culture.	9-2: Establish and maintain a climate of mutual respect, dignity, integrity, and trust.  9-3: Communicate with respect for and appreciation of team members and include them in all relevant information exchange.	IV.A.5.e: Residents must demonstrate a commitment to carrying out professional responsibilities and an adherence to ethical principles. (Professionalism)
<b>ACRL Frame: Research as Inquiry (RI)</b>		
RI-1: Formulate questions for research based on information gaps or on reexamination of existing, possibly conflicting, information.	7-1: Develop a well-formed, focused, pertinent clinical question based on clinical scenarios or real-time patient care.	IV.A.5c: Residents must demonstrate the ability to investigate and evaluate their care of patients, to appraise and assimilate scientific evidence, and to continuously improve patient care based on constant self-evaluation and life-long learning. (Practice-Based Learning and Improvement)  IV.B: Faculty Evaluation
<b>ACRL Frame: Searching as Strategic Exploration (S)</b>		
S-2: Identify interested parties, such as scholars, organizations, governments, and industries, who might produce information about a topic and then determine how to access that information.	7-2: Demonstrate basic awareness and early skills in appraisal of both the sources and content of medical information using accepted criteria.  7-3: Identify and demonstrate the use of information technology to access accurate and reliable online medical information.	IV.A.5c.6: Locate, appraise, and assimilate evidence from scientific studies related to their patients' health problems. (Practice-Based Learning and Improvement)  IV.A.5c.7: Use information technology to optimize learning. (Practice-Based Learning and Improvement)
<b>ACRL Frame: Scholarship as Conversation (SC)</b>		
SC-2: Contribute to scholarly conversation at an appropriate level, such as local online community guided discussion, undergraduate research journal, conference presentation/poster session.	7-7: Communicate one's findings to the health care team (including the patient/family).  13-6: Participate in system improvement activities in the context of rotations or learning experiences (e.g., rapid-cycle change using plan-do-study-act cycles; root cause analyses; morbidity and mortality conferences; failure modes and effects analyses; improvement projects).	IV.B.2: Residents should participate in scholarly activity.

### Findings and Discussion

#### Challenges:

- Determining how close a match needs to be to be a mapped node
  - Narrower – when clear fit
  - Broader – when fit was broadly related to Framework

#### Observations:

- Alignment and gaps between the ACRL Framework and Core EPAs
  - EPA 7-2 was the most mapped EPA to the Framework, followed by 7-3.
  - EPAs 9-4, 9-5, 9-7, 9-8, 13-2, 13-4, 13-5, and 13-7 were not mapped at all.
  - There was high alignment between the ACRL Frame "Information Creation as Process" and the EPAs.
- Alignment and gaps between the ACRL Framework and ACGME Common Program Requirements
  - IV.A.5.c was the most mapped ACGME requirement to the Framework, followed by requirement IV.B. Many were not mapped at all.
  - There was high alignment between the ACRL Frame "Research as Inquiry" and the ACGME requirements.
  - The ACRL Frame "Information Creation as Process" did not map to any ACGME requirements.

#### Implications for Practice:

- Librarians can use medical education-specific language to advocate for their own involvement in medical education.
- Information Professionals should collaborate with other medical education faculty in order to develop effective curricula and assessment for EPAs.
- The application of the ACRL Framework in addition to existing standards in UGME and GME can serve as an outline for curricular milestones repetitively practiced over clinical and preclinical curriculum.
- There is a gap between the theoretical aspects of the Framework, ACGME and EPAs. Work is needed to detail how competency can be defined and assessed.

### Next Steps

- Health Sciences Librarians should map competencies for Dentistry, Social Work, Nursing, Public Health, and others to the ACRL Framework to further build it out.

### References

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