

INTRODUCTION

The following report highlights the work of the AAHSL Competency-Based Medical Education (CBME) Task Force. It includes the AAMC initiative that served as a catalyst for AAHSL involvement, a brief history of the task force (TF), a description of its work, the intellectual products that were produced, member outreach activities both regionally and nationally related to librarian involvement in CBME, and recommendations for next steps by AAHSL to capitalize on the work of this task force and continue to advocate for increased future involvement by librarians in the teaching and assessing of competency-based medical education facets related to evidence-based medicine and information literacy skills.

BACKGROUND ON ENTRUSTABLE PROFESSIONAL ACTIVITIES AND THE NEED FOR AN AAHSL RESPONSE

In 2014 the Association of American Medical Colleges (AAMC) created new guidelines for assessing medical student readiness for residency. There did not exist a common core set of behaviors in undergraduate medical education. The goal is to design a core set of 13 competencies that all residents must demonstrate proficiency in on their first day of residency, regardless of specialty. This is to have a common baseline for all residents no matter which (American or Canadian) medical school they graduated from and outside of local processes and frameworks. Naming their new competency-based framework Core Entrustable Professional Activities (EPAs) for Entering Residency, the AAMC recruited 10 pilot schools to integrate EPAs into their curricula and test how these could be taught and assessed in real situations. The goal for the pilot is that by 2020 these schools can develop best practices and demonstrate the feasibility of using Core EPAs in undergraduate medical education. One part of feasibility beyond the curricular goals is what faculty development needs to occur (recruitment, skill building, collaboration, learning object creation) to successfully implement EPAs¹.

The CBME Task Force was conceived in 2015 when Heather Collins and Rachel Vukas of the University of Kansas Medical Center discovered that there was no organized or formal response to the AAMC EPAs by the medical library community. They reached out to Kelly Thormodson and Rikke Ogawa who brought their observations to Ruth Riley, AAHSL President, in November 2015. After discussions between Collins and Riley, it was agreed that Collins' proposal would be shared with the AAHSL Board at their February 2016 meeting. The AAHSL Board approved the formation of the Competency-Based Medical Education (CBME) Task Force and formalized the Task Force charge in March 2016.

FORMATION OF THE TASK FORCE

Neil Rambo, AAHSL President-Elect, coordinated the call for volunteers and the task force was formally appointed in May 2016 with Heather Collins serving as Chair and Rambo serving as Board Liaison.

¹ Association of American Medical Colleges. (2018). *The Core Entrustable Professional Activities (EPAs) for Entering Residency*. Retrieved from: <https://www.aamc.org/initiatives/coreepas/>

Selection was competitive with many more nominations and expressions of interest than could be accommodated. The composition of the task force was unique in that the majority of the ten members were not directors. All members were actively involved in teaching evidence-based medicine principles and involved with or having scholarly interests in EPAs/CBME. Additionally, three members appointed were from librarians at institutions involved in the EPA pilot. It should be noted that during the term of the task force that seven of the ten members have risen to leadership or director-level positions at their institutions or elsewhere.

It was hoped that the Task Force could capitalize on ACGME movement into milestones at the same time that medical schools were changing curricula in order to respond to the switch to CBME. The Task Force was also to provide advocacy for librarian involvement in information literacy and the teaching and assessing of these skills. Finally, there was a dearth of literature on librarian involvement in these educational activities and the Task Force would add to the professional literature on these topics.

TASK FORCE CHARGE

The Task Force was charged in March of 2016

(https://www.aahsl.org/assets/documents/Committees/aahsl_cbme_taskforce_charge.pdf) with the following:

- Identify AAHSL libraries that are participating to a significant degree in incorporating Core Entrustable Professional Activities (Core EPAs) in the medical education curriculum, through design, development, teaching, evaluation, and/or similar engagement.
- Develop a methodology to characterize the nature and depth of the participation.
- Map and cross-reference existing ACGME, AAMC, LCME, and other EBM competencies as identified by the Task Force. Identify gaps in EBM competencies.
- Compose a white paper or similar work for publication on the state of the art of librarians' roles and involvement in all phases of competency-based medical education. Include recommendations for additional work that is needed (e.g., developing standard definitions of EBM concepts, translating EBM concepts into teachable components, evaluation of the effectiveness of EBM curriculum.)

The Task Force term was set for two years from its convening with a final report due before the AAHSL Annual Meeting in 2018.

BUSINESS OF THE TASK FORCE

The CBME Task Force began its work in May, 2016 at the MLA Annual meeting in Toronto. After that initial meeting, the group met weekly via Zoom to prioritize project tasks and determine a roadmap on the best way to address the charge of the Task Force. Heather Collins, inaugural chair of the task force, established a Google Drive site for the group and organized meeting schedules and agendas. Then-AAHSL President and Board Liaison to the CBME Task Force, Neil Rambo, arranged for the Task Force to use an AAHSL Zoom account to conduct their business.

Task Force members unanimously agreed that the creation of a survey instrument should be the first priority in order to determine how and where librarians were involved in EPAs and CBME. In July, 2016, the Task Force conducted structured phone conversations with librarians involved in the design, development, teaching, evaluation, or other engagement with EPAs and then used this qualitative information to drive the survey building. All members of the Task Force were involved in the conceiving, editing, and vetting of the survey.

The CBME Task Force used the theoretical framework found in The Wilder Collaboration Factors Inventory², to identify levels of librarian engagement with teaching and assessing EBM skills in the curricula of their institutions. This framework, using the concepts of coordination, cooperation and collaboration as measures of the strength of relationships, informed the creation of the survey questions as well as the coding of qualitative responses from the survey results. The survey was distributed to all AAHSL-member institution libraries in October 2016.

As the survey work was going on, several members also delivered papers or posters at regional conferences as well as provided webinars to introduce the work of the Task Force and raise awareness about EPAs and the AAMC pilot to medical librarian colleagues.

After the survey was deployed in October 2016, the group broke into two subgroups to more efficiently accomplish the various charges of the TF. A Survey Subgroup, consisting of Nancy Adams, Heather Collins, Iris Kovar-Gough, Elizabeth Lorbeer, Joey Nicholson, and Judy Spak was formed to compile and analyze the data gathered from the survey. To address the charge of mapping EPAs to the ACRL and other frameworks, a Mapping Subgroup, consisting of Emily Brennan, Rikke Ogawa, Kelly Thormodson, and Megan von Isenberg was formed. These subgroups met independently to move the work forward, alternating weekly with large group meetings where members shared progress and discussed issues in common one week.

SURVEY SUBGROUP

Members of the Survey Subgroup worked with statisticians from KUMC and Western Michigan School of Medicine to analyse the data gathered from the survey.

Key findings from the survey include:

- Librarians are involved in teaching and assessing the content of EPAs, but the librarians and administration may not formally recognize their involvement.

² Mattessich, P. W., Murray-Close, M., Monsey, B. R., & Amherst H. Wilder Foundation. (2007). Collaboration-- what makes it work: a review of research literature on factors influencing successful collaboration. Saint Paul, MN: Fieldstone Alliance.

- Most (90%, n=76) librarians are involved in teaching or assessing functions of EPA 7 which dovetails with their expertise in navigating information.
- Librarians are also involved in teaching and/or assessing in unexpected areas such as EPA 6 (provide an oral presentation of a clinical encounter) and EPA 9 (collaborate as a member of an interprofessional team)

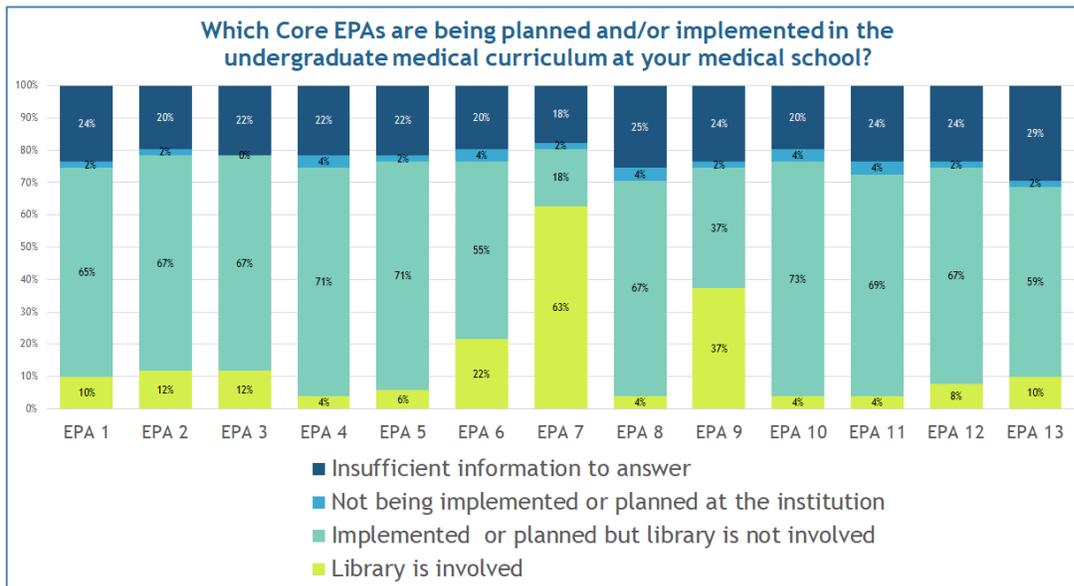


Figure 1. Responses to this question illustrated high librarian involvement with EPA 7, but also revealed that at least a few librarians were involved in each of the 13 EPAs,

Although the charge of the TF called for investigating three of the EPAs, the data revealed that EPA 7-related activities were by far (90% of those who responded) the area where the most librarian involvement occurred. The Survey Subgroup determined that EPA 7 would be the area on which to focus more acutely.

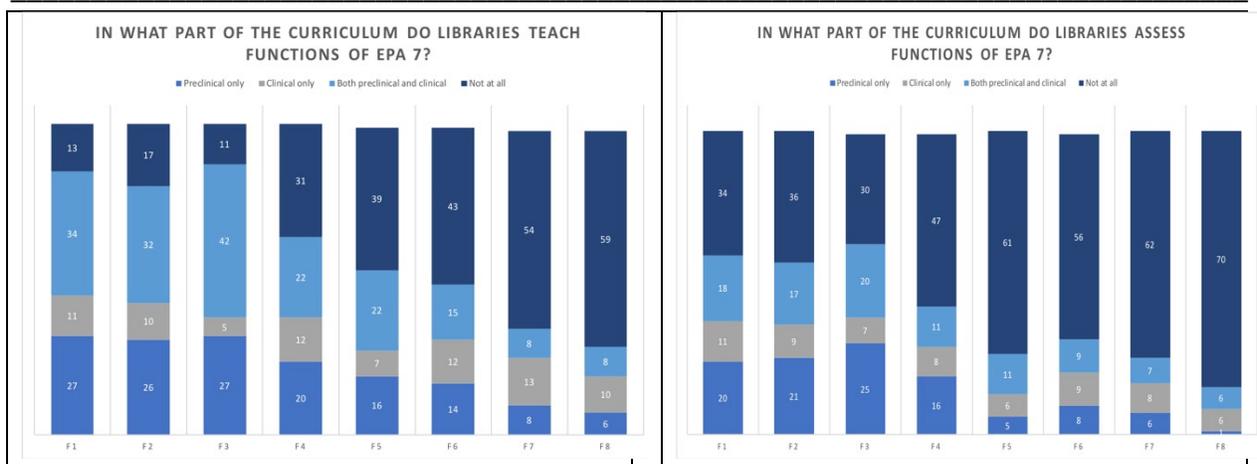


Figure 2. Librarians are involved in all functions of EPA 7, both teaching and assessing, and in all phases of undergraduate medical education.

The data revealed that while librarians are involved in teaching many functions of EPA 7 related to evidence-based medicine, there were far fewer respondents who said they were assessing these functions.

- Barriers & Challenges to librarian involvement:
 - The challenge posing the greatest barrier to implementation of Core EPAs by librarians was lack of time in the curriculum, with 61 libraries responding that this challenge was either extremely or more significant.
 - Lack of resources such as staff time or funding and a lack of existing useful models of other libraries doing EPA work were also mentioned by approximately half of the respondents as either extremely or more significant barriers.
 - Lack of evidence of the value of Core EPAs and "push-back" by students or faculty were seen as barriers that were less significant or not significant at all by the majority of respondents.

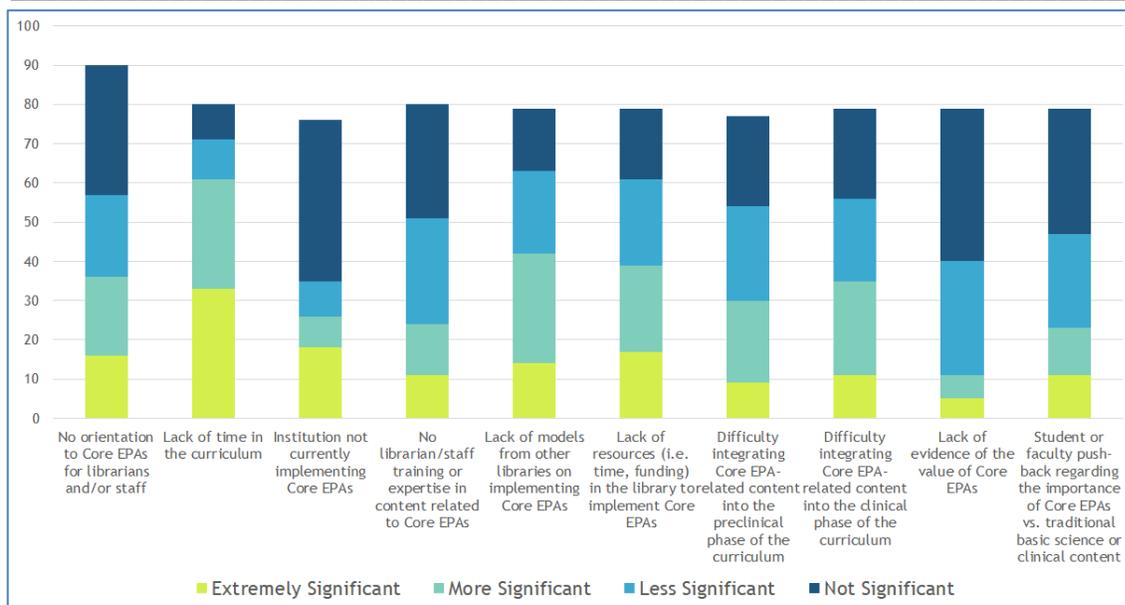


Figure 3. When asked to rate how significant various challenges were to the integration of librarians into the EPA landscape, lack of librarian time in the formal curriculum was selected most often. Lack of models from other libraries was also rated highly.

These barriers can be addressed by several of the Task Force recommendations included in this report. Librarian training and advocacy from AAHSL leadership are two possible ways to deal with challenges faced by many medical librarians.

The significance of the findings:

- Librarians are experts in under-taught and under-assessed areas of medical education, such as the functions described in EPA 7.
- Librarians are being overlooked as teaching partners in medical curricula
- Institutions working toward implementation of EPAs should examine, document, and integrate the curricular efforts of the medical librarians(s) who are likely already teaching/assessing functions of EPA 7 and other EPAs.
- Programmatically including the expertise of librarians can more efficiently utilize subject-expert time and knowledge to meet the needs of both learners and the broader medical profession.

Members of the Survey Subgroup presented findings and progress at professional meetings including the annual meeting of the Medical Library Association, the annual meeting of the Association of College and Research Libraries, and the Canadian Health Libraries Association.

At the time of writing of this report, members of the Survey Subgroup are finalizing edits of a manuscript based on their work for submission to *Academic Medicine* or another medical education journal as needed.

MAPPING SUBGROUP

Results of the survey resurfaced the need for librarians to be able to advocate for their role as educators with an education lexicon that translates information literacy frameworks into the competency-based medical standards common to medical educators. Therefore, this subgroup of the CBME Task Force began work on a cross-referencing map that aligns the undergraduate and graduate medical education competencies and standards to the ACRL Information Literacy Framework. In addition to serving as a lexicon, the map also could be used to identify gaps between and opportunities for enhancing the scholarly expectations of undergraduate and graduate medical education standards and the building blocks of information literacy education.

The AASHL CBME Task Force Mapping Subgroup selected three EPAs for mapping: 7 (“Form Clinical Questions and Retrieve Evidence to Advance Patient Care”), 9 (“Collaborate as a Member of an Interprofessional Team”), and 13 (“Identify System Failures and Contribute to a Culture of Safety and Improvement.”) While the original charge was to map EPAs 6, 7, and 13, the survey revealed that librarians were also involved with EPA 9.

The Mapping Subgroup results were shared in presentations and posters at the annual meeting of the Medical Library Association. At the time of writing of this report, members of the Mapping Subgroup are finalizing edits of a manuscript based on their work for submission to the Journal of the Medical Library Association.

OUTREACH TO AAMC AND ITS MEMBERS

Members of the AAHSL Task Force on Competency-Based Medical Education contributed to the design and content, and/or presented posters on the work of the group at the annual Learn, Serve, Lead meetings of the AAMC in 2016, 2017, and 2018. These important outreach efforts were instrumental in raising awareness of librarian involvement in the EPAs and CBME as well as drawing attention to librarian expertise in teaching and assessing EBM competencies across the medical curricula landscape. This is an important and necessary first step in increasing cooperation, coordination, and collaboration between medical librarians and other medical educators in teaching and assessing these critical skills necessary for quality patient care.

RECOMMENDATIONS:

Based on data from the survey of AAHSL-member institutions and research by the CBME Task Force, the members of the AAHSL Task Force on Competency-Based Medical Education recommend the following:

1. That AAHSL appoint a new CBME Task Force to continue the work started by the first Task Force. Due to the uncertain future of the EPA pilot and the question as to whether medical schools will adopt the EPAs in their current form, this new group should focus more on competency-based medical education and self-directed learning and less on specific EPAs.
 - a. The creation of a Curricular subgroup within the new Task Force whose focus would be to develop CBME curricular modules or other curricula for academic medical librarians based on the mapping work and research done by this committee.
 - b. The work of this new Task Force should be marketed and promoted so as to encourage medical librarians across the country to create and share CBME modules and other materials through MedEdPortal as well as other CBME curricular work to be determined.
2. The AAHSL board should cultivate a stronger connection to AAMC and advocacy in the GEA sphere to advocate for increased librarian integration in this arena. The Task Force has laid the theoretical and research groundwork for AAHSL to take these next steps.
3. AAHSL leadership must continue communication with AAMC and Dr. Alison Whelan, AAMC Chief Medical Education Officer, regarding collaboration between AAHSL members and the AAMC. AAHSL should work with the AAMC to communicate librarian work in the CBME arena in which medical librarians are already engaged. A possible way to achieve this would be through the writing of article(s) on librarians as educators for AAMC News, or other appropriate venues.
4. Establish a web presence for Competency-Based Medical Education on the AAHSL website. Create a new option for this topic on Resources pull-down menu. Content to be included on the page would include 1) overview of AAHSL's commitment to advocacy for librarians' roles and involvement in all phases of competency-based medical education, 2) CBME Task Force reports, and 3) CBME Task Force scholarly output (posters, contributed papers, journal articles). While most of this content is listed in Committees area of website, there is now a sufficient critical mass of content that merits a separate page under Resources. Page could also potentially be replicated on the Advocacy and Initiatives menu which is part of About Us pull-down menu. The page would be further developed to include links to relevant competency-based medical education resources such as AAMC Core Entrustable Professional Activities (EPAs) for Entering Residency website, ACRL Framework for Information Literacy for Higher Education, etc.
5. The CBME Task Force focused on librarian involvement in EPA 7, but data from the survey revealed that other areas and EPAs may be worthy of further analysis. Future iterations of the Task Force should consider additional analysis of librarian involvement in EPAs 6, 9 and 13 as warranted.

6. The creation of a “toolkit” that contains best practices and documentation for librarians teaching and assessing EBM skills to share with administrators/faculty at their respective institutions. These best practices should be endorsed by AAHSL (and possibly MLA) to lend authority to the work of librarians in this area and lend further credibility to the expertise librarians bring to teaching and assessing these EPA 7 functions.
7. AAHSL should communicate with professional organizations, including the Association of College and Research Libraries (ACRL), Special Library Association (SLA), and the Medical Library Association (MLA) to encourage librarians in various disciplines (nursing, dentistry, public health, etc.) to map those health science competencies to the ACRL Framework and publish/share their work.
8. The formation of a new task force across multiple professional organizations interested in information literacy instruction that could aid librarians in how to assess instruction and how to advocate for the role of librarians in the curriculum.
9. Development of a training/certificate program encouraging librarians to extend their work in competency assessment (especially) of information literacy “skills”. This could possibly be an MLA-sponsored program.

Respectfully submitted by:

AAHSL CBME Task Force

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Appendices:

CBME Task Force Survey Instrument

<https://drive.google.com/open?id=0B8SZQopvGzuEOE42cl94cnUxMG8>

2017 Annual Report/Update

https://drive.google.com/open?id=1-zw4KbKNfb6vvQvW6PA0yPT_874ss1pO

2016 Annual Report/Update

https://www.aahsl.org/assets/2016/Committee/aahsl_cbme_2016_report.pdf

List of CBME Task Force Presentations and Posters

<https://drive.google.com/open?id=1wtPQLCYBZZXuYRMFB8BZjMzP6njQByll>

National and International Task Force Presentations and Posters (PDFs)

<https://www.aahsl.org/committees>

Health Information Literacies Competencies Map©

<https://www.aahsl.org/assets/docs/Health%20Information%20Literacy%20Competencies%20Map%20%28excel%29.pdf>