What Information Resources do Students Use?

Analysis of Information Resources used in Convergence PBL

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Introduction

Convergence is a problem-based learning (PBL) course occurring in January of the second year, in which the students meet in small groups and work through seven clinical case problems. An important component of the PBL process is “self-directed” learning: students identify their knowledge gaps and formulate “case questions” to research outside the classroom and then return to present their findings to their peers. As they analyze and synthesize information relevant to addressing their questions, each student must assess the credibility of information resources and develop information seeking skills, a medical knowledge competency at LCOM.

Project

The resources students used to research Convergence case questions were analyzed in order to understand their information seeking skills and preferences at this point in their education.

EBM Decision Tree resources

Background

- Textbooks
- UpToDate
- Class materials
- PubMed - Review Articles
- Micromedex
- Epocrates
- Prescriber’s Letter

Foreground

- Cochrane Library
- Natural Medicines
- UpToDate
- VisualDx
- CP Clinical Guidelines
- Choosing Wisely
- Guideline Central
- TRIP
- USPSTF
- PubMed Clinical Queries

Public Health

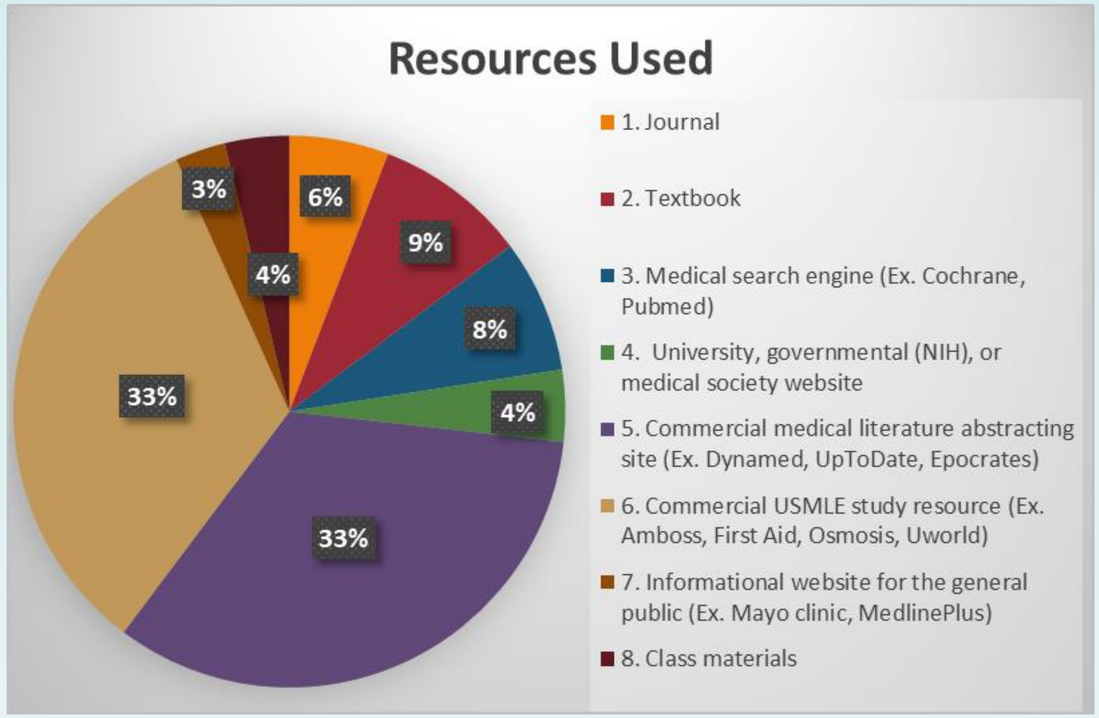
- CDC
- VT Dept. of Health
- Vermont 2-1-1
- CT Dept. of Public Health
- CT Dept. of Mental Health
- Danbury Dept. of Health and Human Services
- Norwalk Health Dept.

Methods

At the onset of the course, students were given electronic tablets and received a presentation on information seeking skills. Students were introduced to the EBM Resources Decision Tree tool (https://www.uvm.edu/~dana/ebmtree/) to assist in identifying and locating appropriate information sources (see EBM Decision Tree chart). During the small group sessions and for each case question presentation, the students were asked to report the resources they utilized. These data were analyzed grouping the resources into 8 categories (see Resources Used chart).

Results

Resources data were collected from 15 groups of seven or eight students over seven cases. The group response rate over the seven cases was 65%. Overall commercial medical literature abstracting sites were cited most frequently at 33.5% of total citations, while commercial USMLE study resources were cited nearly as often at 33%. The remaining categories ranged from 3-9%.



Discussion

The high use of USMLE study resources is likely related to timing relative to taking USMLE step 1, and the students' regular reference to and use of USMLE Step 1 study guides during the course. The high use of highly abstracted resources such as UpToDate may reflect preference for quickly reviewed materials and familiarity with this resource. Information seeking skills should be evaluated at multiple times in the curriculum to evaluate competency development and identify opportunity for education intervention. Krasne et al. previously found that the provision of a resource matrix and librarian-guided workshops on locating authoritative sources “significantly increased citations to peer-reviewed journal articles and guidelines and decreased citations to general public Web sites and highly abstracted resources”. Future work could include evaluating how resource utilization changes among students enrolled in Convergence after similar information seeking workshops. Additional work could also include how usage of USMLE study resources changes after Step 1 is changed to pass/fail in 2022.

References

Krasne S, Stevens CD, Wilkerson L. Improving medical literature sourcing by first-year medical students in problem-based learning: outcomes of early interventions. Acad Med. 2014;89(7):1069-1074. doi:10.1097/ACM.0000000000000288