

Information Literacy Learning Module

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Introduction

Palliative care is defined by the World Health Organization as

“An approach that improves the quality of life of patients and their families facing the problem associated with life-threatening illness, through the prevention and relief of suffering by means of early identification and impeccable assessment and treatment of pain and other problems, physical, psychosocial and spiritual (WHO).”

The field of palliative care is exploding in healthcare today, with these specialty services being rolled out in hospitals, long-term care facilities, outpatient clinics, and patient’s homes.

Unfortunately we are suffering from a severe shortage of healthcare providers trained to provide palliative care.

The University of Maryland Baltimore is launching a Master of Science degree in Palliative Care in Spring 2017. The program will be conducted entirely by distance education using asynchronous learning. Learners will come from a variety of healthcare backgrounds including medicine, nursing, pharmacy, social work, chaplaincy and counseling.

Along with the explosion in palliative care services, we are experiencing an explosion of research in palliative care, the majority of which influences the care of patients with advanced illnesses. It is imperative that palliative care providers possess highly developed information literacy skills in the retrieval of literature that support one leg of the three-legged stool known as “evidence-based medicine” (EBM). This paper will discuss what is meant by evidence-based medicine and information literacy, and why it is critically important for learners in this new Master of Science in Palliative Care program to possess excellent literature retrieval skills. These skills will be taught through an online tutorial titled “Acquiring Evidence in EBM.”

Explaining evidence-based and medicine information literacy

Evidence-based medicine is an approach to teaching the practice of medicine that directs learners away from traditional medicine, a “seat of the pants” method of clinical decision-making, and moves clinicians to more of an evidence-based method. Specifically, EBM is defined as “the integration of best research evidence with clinical expertise and patient values in direct patient care” (Sackett, Straus, Richardson, Rosenberg & Haynes, 2000). Clinical expertise is acquired from clinical practice and is useful in identifying a patient’s problem and the cause of the complaint. Patient’s values must be considered as well including their preferences, concerns and expectations from potential action courses. The term “best research evidence” refers to accessing and evaluation scientifically valid, clinically relevant, patient-centric research, which requires a high degree of information literacy. Information literacy is defined by the Association of College & Research Libraries as the ability “to recognize when information is needed and have the ability to locate, evaluate, and use effectively the needed information” (1989, para. 3).

There are several potential pitfalls in the execution of providing EBM. First, it is unlikely that a busy physician (who is allocated 7 minutes for the average patient encounter) will have time to perform a comprehensive literature search, pull relevant articles, and evaluate the research (determine validity, applicability to patient case, translation to clinical practice) all while the patient waits patiently in the exam room (White, 2004, pp. 51-52). Second, while it’s good news that the idea of EBM has been adopted as an international health care paradigm, it has led to the promulgation of a mind-boggling number of “clinical guidelines” published by individuals, organizations, insurance companies, and others that makes it challenging to make

sense of “the cacophony of overlapping, conflicting, and poorly constructed guidelines” (Timmermans & Mauck, 2005, p. 19). In fact, the ability of medical residents to provide evidence-based medical care has shown disappointing results for a variety of reasons, including the ability to quickly and accurately assess the plethora of “evidence” available on the internet (Hatala & Guyatt, 2002, p. 1110).

One of the core elements of the “why” for the Master of Science in Palliative Care program at the University of Maryland Baltimore is as follows: “If you’re the kind of person who enjoys the process of discovering **evidence-based medicine** and how to translate it into the best possible care for fragile patients desperate for your care...” (University of Maryland Baltimore, 2016). All enrollees in this distance education master’s program will be required to take this tutorial.

Learning Module Overview

The ACRL Information Literacy Competency Standards for Higher Education promote five standards related to information literacy (ALA, 2016). Standard two addresses “the information literate student accesses needed information effectively and efficiently” (ALA, 2016). This includes selecting appropriate investigative methods and information retrieval systems, designing and refining effective literature search strategies using the internet or other methods, and extracting the information.

Students enrolled in the Master of Science in Palliative Care program will complete 30 credits (10 courses, 3 credits each). The entry level course is titled “Principles and Practice of Hospice and Palliative Care.” This course will provide building blocks and set the stage for the

entire program. One module in this introductory course will be information literacy, as it supports the practice of EBM, specifically ALA standard two as described above. The course will be built on the Dartmouth Biomedical Libraries “EBM Resources” pyramid (Dartmouth Biomedical Libraries, 2015) that explains the quality of evidence from lowest to highest. Topics will include:

1. Definition and explanation of EBM
2. Information resources
 - a. Background information/expert opinion
 - b. Unfiltered information
 - i. Case-controlled studies, case series, reports
 - ii. Cohort studies
 - iii. Randomized controlled trials (RCTs)
 - c. Filtered information
 - i. Critically-appraised individual articles (article synopses)
 - ii. Critically-appraised topics (evidence synthesis)
 - iii. Systematic reviews
3. Overview of appraising and applying medical evidence

It is anticipated that all faculty teaching in this program will expect learners to apply these EBM skills throughout the remaining coursework.

Analysis of Information Literacy Tutorials

With the adoption of EBM as a required performance standard in medicine, many academic institutions have developed online interactive tutorials for learners to master these skills. Two in particular are quite comprehensive and useful, although quite broad in scope with a dizzying array of avenues to explore.

- *Duke University Medical Center*: This tutorial uses an interactive Web 2.0 tutorial that is available at all times for students to access. It is freely accessible for learners under a creative commons license (noncommercial, share alike). This tool is quite comprehensive, yet very clear and directly worded. On the “Home” page they clearly identify the five units covered in the tutorial: Overview, Ask, Acquire, Appraise and Practice. They estimate that the tutorial takes about one hour, and the practice case takes an additional hour. The practice cases ask a series of multiple choice questions that provide immediate learner feedback (correct or incorrect, and why). Links to additional resources and additional readings are provided throughout the tutorial. Importantly, all pages in the tutorial are formatted with a convenient print option (Duke University Medical Center Library and the Health Sciences Library at the University of North Carolina at Chapel Hill, 2014).
- *University of Massachusetts Medical School Lamar Soutter Library*: This Web 2.0 tutorial is also available at all times to learners, and a link is provided to convert all materials to a printable format. This site is a bit different because it presents several pages of lessons in bite-sizes, but also has tabs for easy navigation to the learning modules. Tabs include the home page (Why EBM? History of EBM, EBM at UMMS, EMB Pyramid, Using the EMB Pyramid), Using EBM effectively (the use of pneumonics in EBM), Evidence-Based Information Resources with links both within and outside their library, Learning Modules

(including several completely adorable video parodies, one titled “Some Studies That I Like to Quote” to the tune of “Somebody That I Used to Know” that must be listened to - <http://libraryguides.umassmed.edu/content.php?pid=223229&sid=1861294>. And of course my personal favorite – Bohemian Polypharmacy Rhapsody). I found this resource to allow even greater flexibility than the Duke tutorial, with even more links to other adventures (University of Massachusetts Medical School Lamar Soutter Library, 2016).

Conclusion

The internet is a rich resource for retrieval of medical information, but it can be confusing to do so in a quick, efficient manner. The two tutorials explained in this paper are excellent examples. The learning module prepared for the Master of Science in Palliative Care programs takes advantage of links that go back to the University of Maryland Baltimore Health Sciences Library. Completion of this learning module will set learners on the path to achieving optimal outcomes, ready to practice in an evidence-based medicine environment.

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