

MEDICAL LIBRARIANS AND PHYSICIANS AS PARTNERS IN TEACHING HEALTHCARE PROFESSIONALS TO USE POINT-OF-CARE RESOURCES

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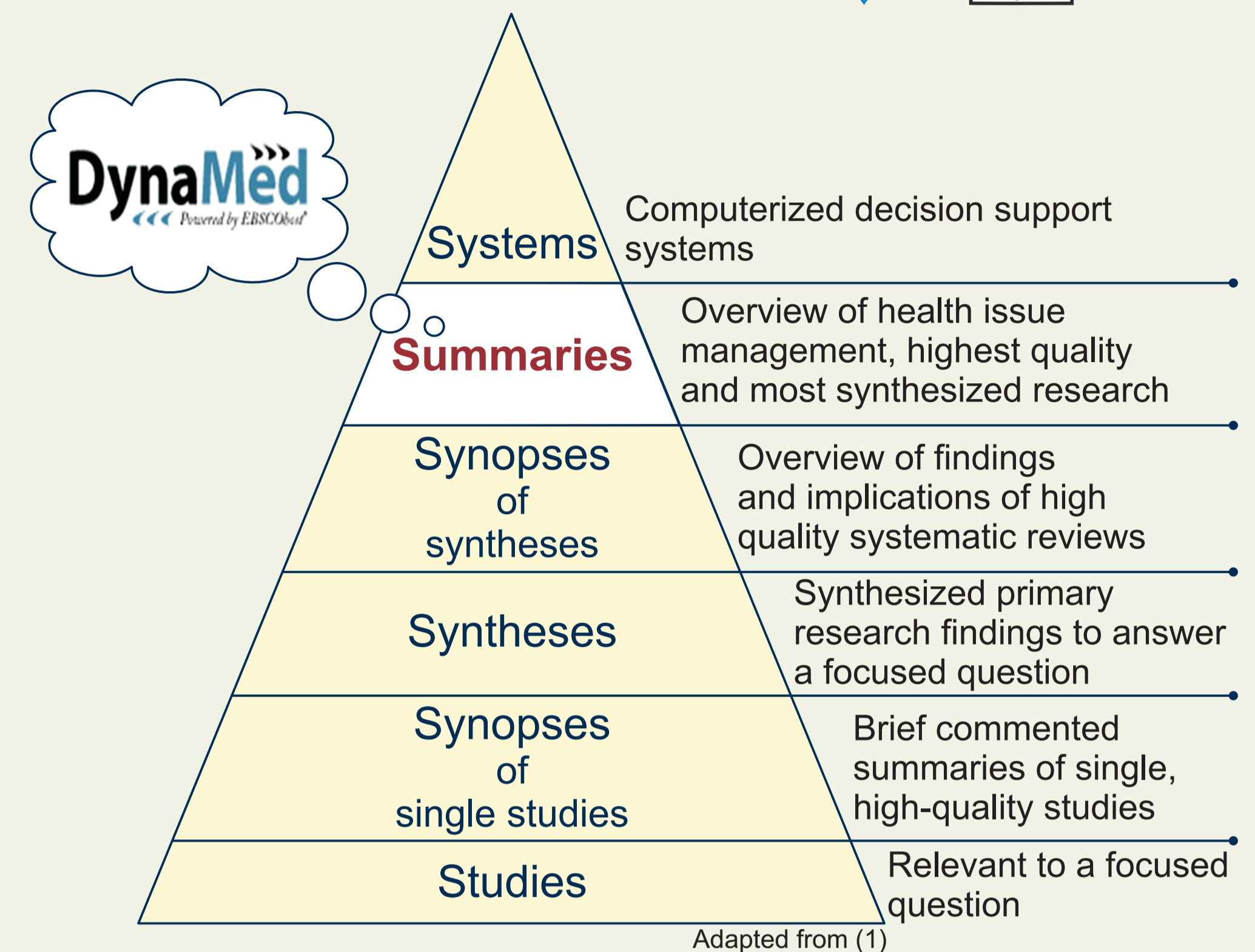


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INTRODUCTION

Traditionally, access to the best evidence required literature searching skills and subsequent critical appraisal knowhow. Since the past decade new types of information resources have been created called „pre-appraised“ or „point-of-care“ (POC). They should only contain higher quality clinical research results that are regularly updated. To help users judge the strength of evidence a „6S“ model has been in use as a result of fine-tuning original Haynes' „4S“ and „5S“ ones (1). When applying this model it is recommended to start information retrieval at the highest possible layer of the pyramid represented by computerized decision support systems (CDSSs). If they do not exist to solve a specific clinical problem, the next step is to look at summaries (eg. evidence-based clinical practice guidelines, evidence-based textbooks, Clinical Evidence, DynaMed, UpToDate, PIER), followed by synopses of syntheses (eg. ACPJC, Evidence-Based Medicine, Evidence-Based Nursing), and syntheses (eg. ACPJC PLUS, Evidence Updates, the Cochrane Library). If there are none of the above formats related to the clinical problem, the next step is synopses of single studies, often accompanied by commentaries confirming their clinical applicability. They can be found in evidence-based abstraction journals, eg. AAP Grand Rounds. The last option is to use traditional non-appraised services, such as PubMed/MEDLINE, EMBASE, CINAHL etc. to search for single studies.



MATERIALS & METHODS

Two teams of Czech medical librarians (National Medical Library, Prague and Palacky University Medical Library, Olomouc) have adopted uniform case-based methodology from Palacky University Olomouc paediatricians (2) to increase the effectiveness of using one of the widely recognized point-of-care tools - DynaMed. A virtual collection of online interactive paediatric cases (PedKaz) was made available as a virtual educational tool to help formulate clinical questions in the absence of real healthcare settings (3). Face-to-face as well as blended learning approaches were applied for information skills training courses.

RESULTS

Table 1 gives a survey of six training courses organized by the two collaborating institutions in spring 2014 to address mixed audiences (n=249), ie. primary care and hospital doctors, undergraduate and post-graduate medical students and health sciences librarians. All the trainees were naïve to DynaMed that was taught either separately from other medical information resources, or as part of a training scheme using multiple information sources. A common issue for all the courses was DynaMed, post-course feedback, and a more or less involvement of healthcare professionals in the teaching process. All categories of the trainees appreciated ease of searching and medically-logical arrangement of hyperlinked results, but they needed detailed explanation of the updating process and a system of labelling evidence.

Table 1: Training Courses 2014

Event	Organized by	Trainees	Facilitators	Sources	Description	Feedback
No. 1	National Medical Library (Prague)	Primary care doctors n = 20	Medical librarians	DynaMed MEDLINE	F2F interactive, librarian-guided searching session. Out of 23 clinical questions proposed by trainees during the course 13 were satisfactorily answered by DynaMed. The remaining queries were then re-formulated to produce a building block search strategy suitable for MEDLINE search.	Post-course interview on perceived advantages/disadvantages of DynaMed as compared to MEDLINE, librarians' role in facilitating the information search process, doctors' contribution.
No. 2	National Medical Library (Prague)	Hospital doctors n = 7	Medical librarians	DynaMed, MEDLINE, search engines	F2F, librarian-guided interactive course to demonstrate tools and functions of DynaMed to answer clinical research questions that had been submitted online by the participants during registration. This pre-requisite helped the facilitators guarantee well-constructed search strategy to produce highly relevant search results.	Post-course interview on perceived advantages/disadvantages of DynaMed as compared to other sources of information, librarians' role in facilitating the information search process, doctors' involvement.
No. 3	National Medical Library (Prague) for Charles University Prague, 2nd Medical Faculty	Pre-clinical medical students n = 24	Academic staff	MEDLINE/PubMed, Cochrane Library via Ovid, DynaMed	F2F presentation about basic features of the information resources to be trained, online test (LMS Moodle) comprises a selection of 1 medical topic out of 23 items followed by a proposal of a search strategy for each source.	Standard student assessment.
No. 4	Palacky University Olomouc Medical Library in collaboration with the Department of Medical Biophysics	Clinical dental students n = 84 (6 groups of 14)	Medical librarians with professional support from academic staff in constructing research questions	Search engines, MEDLINE/PubMed, Bibliographia Medica Czechoslovaca, DynaMed, UpToDate	F2F presentation and interactive, librarian-guided training to find answers to 2 research questions using multiple sources. Exclusiveness of DynaMed was particularly evident in dentistry – general medicine interactions.	Post-course interview.
No. 5	Palacky University Olomouc Medical Library in collaboration with the Department of Paediatrics	Clinical students in paediatric clerkship n=75 (3 groups of 25)	Medical librarians in collaboration with academic staff	MEDLINE/PubMed, DynaMed, UpToDate	F2F online librarian-guided training to demonstrate multiple source possibilities to find answers to PICO questions, based on real paediatric cases.	Post-training library service, document delivery, consultations.
No. 6	Palacky University Olomouc Medical Library in collaboration with the Dean's Office	Post-graduate medical students n=39 (3 groups of 13)	Medical librarians in collaboration with academic staff	Search engines, MEDLINE/PubMed, Bibliographia Medica Czechoslovaca, DynaMed, UpToDate	F2F online librarian-guided training to demonstrate multiple source possibilities to find answers to PICO questions. DynaMed taught as part of search sessions using multiple information resources, i.e. search engines, bibliographic & fulltext databases, e-books etc. to get the best evidence.	E-learning self-study, post-course library services, document delivery, interview.

DISCUSSION

Healthcare professionals routinely use multiple online resources to search for patient care information comprising the knowledge that may vary or even contradict. These include bibliographic databases, general search engines and specialized medical resources, such as DynaMed belonging to POCs. Some studies (4, 5, 6) have demonstrated that DynaMed ranked highest among 10 online medical texts evaluated in three aspects: timeliness of content updating, breadth of coverage and quality of evidence reporting. Another investigation (7) has confirmed that new research findings are incorporated into the summaries every time they are published. In 2011, DynaMed was tested against 7 other POCs for frequency of updates of the top 10 selected diagnoses (6). In this aspect it significantly outperformed the others. In concert with other authors (8) our experience has confirmed that there are still some perceived barriers to accessing healthcare information online, surprisingly even lack of awareness of medical librarians as potential information enablers. Thus, the librarians should tailor their training to the specific needs of different user groups or individuals. In close collaboration with the end-users they have to alleviate the difference between an idealised academic model of literature searching and a real world of practice-based clinical scenarios.

CONCLUSIONS

Evidence-based point-of-care services remain an important resource for healthcare providers and patients. Due to the specific features of these tools and their dynamic nature various categories of end-users should be continually educated how to deploy them effectively. It seems realistic that the needs of real-world practice are satisfied by librarian-clinician collaborative training sessions in multidisciplinary teams.

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