Evidence-based medicine resources tool kit revisited

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Medical librarians ensure high-quality evidence is made available to health care professionals in an efficient manner. As electronic resources proliferate and evolve, and given the lack of practical guidelines or tools that can guide clinicians' questions, finding authoritative information at the time of need is a considerable barrier for clinicians. Since its publication in 2008, the evidence-based medicine (EBM) resources tool kit has been used by physicians and medical students as a practical teaching and clinical decision-making tool in a number of national and international institutions.[1,2] In the original EBM resources tool kit, the resources were based on what should be available in a core hospital library collection. The newly revised tool kit contains updates to electronic resources and an image legend that indicates which resources are open access, as well as which resources are accessible via supplementary mobile apps.[3] Since its inception, the EBM resources tool kit has evolved in 2 ways. The integration of the 6S Pyramid has transformed the structure and rationale of the EBM tool kit tiers, and new electronic resources and tools have been embedded in the research offerings.

A key update to the EBM resources tool kit is the integration of the 6S Pyramid in the hierarchy of medical evidence. Linked scope notes define each resource according to the 6S Pyramid, while recognizing there is a lack of "integrated computerized decision support systems" at the top of the 6S Pyramid in a Canadian context.[4] Libraries license newly offered publisher packages that might not be integrated into a traditional online library catalog or discovery layer. A researcher would need to know which publisher package contains which core electronic resources. The EBM resources tool kit makes evidence-based resources more accessible for physicians who need to locate clinical answers in a timely manner. The tool kit is an algorithm that serves as a critical pathway in the field of medical research and also functions as a teaching model.[5] The electronic resources are categorized as summaries, synopses of syntheses, syntheses, synopses of single studies, and single studies.

How the tool kit works

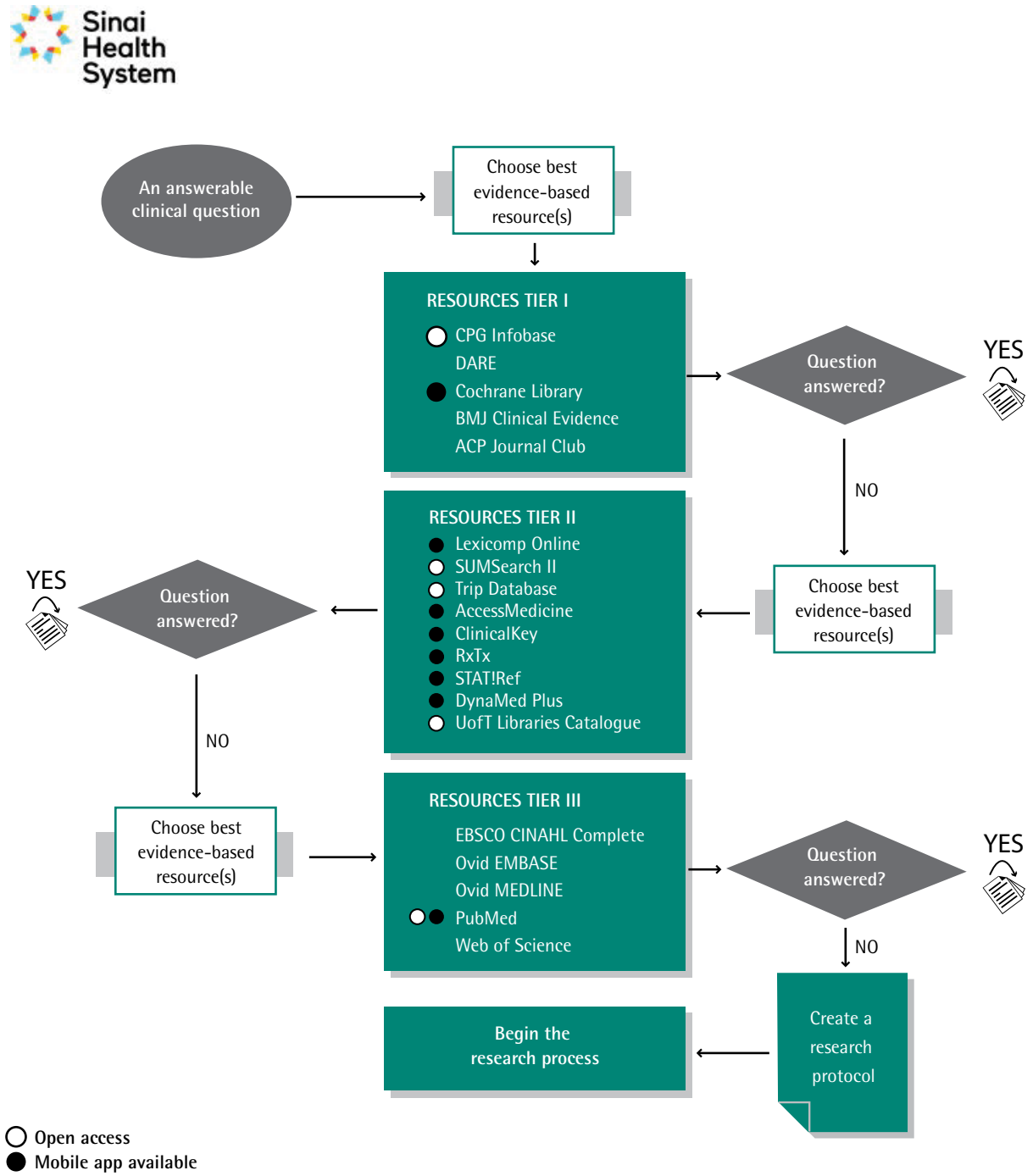
For clarity, users are encouraged to read this article while referencing the EBM resources tool kit in **Figure 1** or at **www.mountsinai.on.ca/ebm-toolkit**.

An answerable clinical question. The first step of the online tool kit is hyperlinked to information on formulating effective clinical queries using the PICO model: patient or population, intervention, comparison, and outcome. It is important to build a clinical query that addresses *specific* patients or conditions to yield more focused and manageable literature search results.[6] The next step is choosing the best evidence-based resources, and the white box hyperlinks to scope notes that describe the authority, content, focus, and scope of each resource listed in Tier 1.

Tier I. The Resources Tier 1 box lists filtered, preappraised resources such as clinical practice guidelines and synopses of syntheses. The CPG Infobase, DARE, Cochrane Library, and ACP Journal Club are core examples of Tier I resources that provide access to guidelines and comprehensive systematic reviews of medical and scientific literature. If you were to find a review that was relevant to your patient care query in Tier I, you would have completed your literature search.

Tier II. If Tier I does not address the clinical query, the next step is to use resources listed in the Resources Tier II box. Tier II resources are clinical decision support systems and summaries, which include authoritative full-text electronic medical texts, guidelines, and Clinics Review Articles. The Clinics are summaries of the literature presented as journals specific to medical specialties (eg, Medical Clinics of North America). A challenge for clinicians when it comes to electronic resources is to know which specialty and subspecialty core resource textbook is in which publisher's package. Before 2008, for example, *Harrison's Principles of Internal Medicine* was published annually in print and then offered by licence as an online reference book. Now *Harrison's Principles of Internal Medicine* resides within the AccessMedicine package of electronic resources. *Harrison's Principles of Internal Medicine* is presented as a searchable clinical decision support database that is updated continuously through an alert system. Key texts such as *Tintinalli's Emergency Medicine* are also available through AccessMedicine. This package offers more than 140 medical textbooks and a drug database based on the content of Lexicomp. Another new resource includes ClinicalKey, which offers a point-of-care tool for answering clinical queries. ClinicalKey is a complementary resource for the members of the

Figure 1. Updated evidence-based medicine resources tool kit



www.mountsinai.on.ca/ebm-toolkit

Canadian Medical Association. Another clinical reference tool that can complement a core medical library collection is DynaMed Plus. RxTx, formerly known as *e-CPS,* is a source of Canadian drug information supported by the Canadian Pharmacists Association and it is also available to Canadian Medical Association members. Lexicomp Online is a source of drug information that covers a range of topics including, but not limited to, drugs and drug interactions, diseases, toxicology, and patient education.

Tier III. If you cannot find what they are looking for in Tiers I and II, you are directed to nonfiltered sources in the final tier, Tier III. Tier III recommends synopses of studies as well as single studies. Synopses of studies can be found in PubMed and Ovid MEDLINE. PubMed also provides single studies and offers user-friendly methods of making a search specific or sensitive with the PubMed Clinical Queries platform. Additional specialty indices such as PsycINFO are defined in the database scope notes hyperlinked in the adjacent white box.

Create a research protocol and begin the research process. If the tool kit fails to produce answers to the particular clinical question, this might represent a research area that requires further investigation through new research, clinical trials, or the submission of a research protocol to the research ethics board.

What the tool kit means

The EBM resources tool kit provides added value for health care professionals by evaluating, organizing, and summarizing electronic resources that support everyday clinical queries. The tool kit works to ensure that high-quality information reaches clinicians and patients when it is needed, subsequently saving time and reducing costs.[7] The updated tool kit encourages optimal use of electronic resources and available mobile apps but, most important, it supports the practical application of evidence-based clinical resources in a timely manner. The tool kit is continually reviewed to ensure it is up to date and relevant to provide physicians and students with access to high-quality, authoritative evidence-based resources.

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Competing interests
None declared

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