Internet Point of Care (PoC)

Introduction

In this issue, we highlight the use of a self-directed, online learning CME activity (Internet PoC) for appointed clinical adjunct faculty and PoC’s role in translating new knowledge into practice and improving patient care (Figure 1). One of the long-term goals is achieving Healthy People 2020 goals which represents the highest level of population health.

A brief discussion of Internet PoC, Evidence-Based Medicine (EBM), and Healthy People 2020 is presented to introduce the connection to the CME activity format and as a faculty development tool for PoC. A checklist of the Internet PoC activity provides an easy-to-use guide in implementing the CME activity in your practice, patient care, and potential impact on HealthyPeople2020.

Finally, the role of medical librarians and Health Information Technology (HIT) on the CME team, an essential part of PoC learning, is discussed; providing a valuable resource for clinical care decisions.

Figure 1
What is Internet Point-of-Care (PoC)

Internet point of care (PoC) CME describes structured, self-directed, online learning by physicians on topics relevant to their clinical practice. Learning for this activity is driven by a reflective process in which physicians must document their clinical questions, the sources consulted, and the application to practice. (Wentz, D. Continuing Medical Education: Looking Back, Planning Ahead)

The goal of Internet PoC is to enhance physician’s knowledge, competence, and performance that can be applied to their practice with a desired outcome of better health care outcomes for their patients and, hence, to improve population health (Healthy People 2020). Internet PoC meets desired CME and life-long learning needs through adult learning principles where physician learning is active rather than passive, and most successful when placed in the context of relevant patient care, physician’s self-direction and self-assessment, and reflective practice.

To meet Internet PoC criteria for CME, the process must include the following (adapted from The Physician’s Recognition Award and Credit System, 2010 rev):

1. Have an established process for the accredited CME provider to oversee content integrity, with responsibilities that include, but are not limited to, the appropriate selection and use of professional, peer-reviewed literature, and ensuring that search algorithms are unbiased.
2. Provide clear instructions to the physician on how to 1) access the portal, database, which databases have been vetted for use, 2) how participation will be tracked and, 3) how the accredited CME provider will award credit.
3. Verify physician participation by tracking the topics and sources searched.
4. Implement reasonable safeguards to assure appropriate use of this information.
5. Provide a procedure by which physicians can give feedback on overall system effectiveness.
6. Establish a procedure by which physicians may claim CME Credit, by completing and documenting the required three-step cycle:
   a. Review original clinical question(s).
   b. Identify the relevant sources from among those consulted.
   c. Describe the application of their findings to practice and whether it resulted in a change in knowledge, competence or performance as measured by physician practice application or patient health status improvement.
What is Evidence-Based Medicine (EBM)

History of EBM

One of the earliest and most widely-accepted definitions of evidence-based medicine (EBM) comes from a 1996 article by David L. Sackett. The article states that EBM is “the conscientious, explicit, and judicious use of current best evidence in making decisions about the care of individual patients.” Though many physicians practiced variations of evidence-based medicine before this, the literature on and interest in the concept exploded in the early 1990s and continues to this day.

The EBM Process as it Relates to Point of Care

Point of Care emphasizes active learning on the part of the physician. Though EBM relies on literature for evidence, it also requires that a physician has the skills necessary to search for, acquire, assess, and apply appropriate evidence based literature to his or her practice. In order to apply EBM to practice through active learning, physicians may consider following the five to six step process, abbreviated by the acronym 5A+E.

5A+E stands for ask, acquire, appraise, apply, assess, and evaluate. Practitioners of EBM must ask answerable questions clearly in order to search for responses efficiently. One method of asking questions is to plot them according to the PICO(T) model, which outlines population/patient, intervention, comparisons, and outcomes. (For more information about PICO(T) see the “Tips for Searching the Literature” section of this newsletter.) Next, providers must search for evidence according to their questions. This can be done in a variety of databases with the assistance of librarians, if desired. After acquiring literature, the physician or health care provider must assess the validity of the articles and their usefulness to answering his or her question. Once recommendations from the literature are considered valid and useful, they are applied to practice. Finally, physicians and other practitioners must assess the outcomes of applied evidence to confirm any benefits or drawbacks to their changes in practice.

Criticism

Without research and evidence to support treatments, physicians could run the risk of injuring patients or providing them with ineffective remedies. Because of this, awareness of evidence from current relevant literature is important; however, it is also recommended that physicians use expert opinion in order to inform their appraisal of literature and evidence. Some concerns regarding EBM lie in criticisms of the literature from which evidence is retrieved. With the rise and acceptance of EBM came companies, primarily pharmaceutical, who published research that promoted their products. As many pharmaceutical companies have the necessary funds to experiment, perform trials, and publish, this has led to a bias in a portion of the literature from which evidence could be drawn. This results in a critical need to examine and consider author bias and funding sources when exploring literature. In order to facilitate this, better assessment tools and more independent and unbiased research is called for by those critiquing EBM.
What is Healthy People 2020

Healthy People 2020, the product of an extensive stakeholder driven process, is an ambitious, yet achievable, 10-year agenda for improving the Nation’s health. For the past 30 years, Healthy People has represented the United State’s vision for a healthier future, serving as a roadmap for the nation by establishing a broad set of overarching health goals and specific actions (communicated by high-priority health issues, Figure 2) to improve length and quality of life. The Healthy People initiative is grounded in the principle that setting national objectives and monitoring progress can motivate action, and indeed, in just the last decade, preliminary analyses indicate that the country has either progressed toward or met 71 percent of its Healthy People targets. On December 10, 2010, the U.S. Department of Health and Human Services unveiled Healthy People 2020.

Vision  A society in which all people live long, healthy lives.
Mission  Healthy People 2020 strives to:

- Identify nationwide health improvement priorities.
- Increase public awareness and understanding of the determinants of health, disease, and disability and the opportunities for progress.
- Provide measurable objectives and goals that are applicable at the national, State, and local levels.
- Engage multiple sectors to take actions to strengthen policies and improve practices that are driven by the best available evidence and knowledge.
- Identify critical research, evaluation, and data collection needs.

Overarching Goals

- Attain high-quality, longer lives free of preventable disease, disability, injury, and premature death.
- Achieve health equity, eliminate disparities, and improve the health of all groups.
- Create social and physical environments that promote good health for all.
- Promote quality of life, healthy development, and healthy behaviors across all life stages.

The goal of this newsletter is to highlight the use of a self-directed, online learning CME activity (Internet PoC) and its’ potential role in translating new knowledge into practice, improving patient care and health outcomes, and achieving Healthy People 2020 goals (Figure 3).
Checklist for Implementing Internet PoC in your Practice

This CME activity encourages physician life-long learning, self-direction, self-assessment, reflection and evidence use; active learning interventions with the potential to change practice behaviors and improve health care outcomes.

✓ An Internet PoC CME activity will be released fall 2014 with details and portal link emailed to LMU-DCOM appointed Clinical Adjunct Faculty.

✓ Register for/log in to the Internet PoC activity, read the PoC instructions, and complete the required webform fields.

✓ Identify a topic relevant to your patient population/health care practice which addresses a need in health care (e.g., pain management, hypertension screening, domestic violence screening).

✓ Record your clinical question and description of search process (we recommend the PICO(T) model: Patient or Population, Intervention, Control, Outcome, and Time on page 6 of the newsletter). Ex. of clinical question: How effective is yoga for treating back pain in the elderly?

✓ Search for the answer to your clinical question through the Dr. Lon and Elizabeth Parr Reed Health Sciences (LMU-DCOM) Library EBM resources on http://library.lmunet.edu/medlib (see page 7 of the newsletter). You will need your user name and password provided to you at the time of clinical adjunct faculty appointment.

✓ Document the EBM resources you used to answer your clinical question, in the online form. Include citations (author, title, date, etc) or copy and paste the url address. Examine author bias, acknowledgements, and institutional affiliations in order to assess source validity.

✓ Provide a brief summary of the answer to your clinical question including how you will apply the findings to your clinical practice /patient care.

✓ Identify if the Internet PoC activity resulted in a change in Competence (e.g., demonstrating the ability to apply knowledge), Performance (e.g., implementing learned strategies in practice), and/or Patient Outcomes (e.g., the end results of particular health practices and interventions).

✓ Complete the brief PoC activity evaluation and ownload your CME certificate for .50 AOA Category 2-B credit (pending) or AMA .50 PRA Category 1 Credit™. 0.5 CME credits may be earned for each qualifying search performed, to a maximum of 20 credits per year.

The University of New England College of Osteopathic Medicine (UNECOM) is accredited by the American Osteopathic Association (AOA) and the Maine Medical Association’s Committee on Continuing Medical Education and Accreditation to provide continuing medical education for physicians. UNECOM designates this online CME activity for a maximum of 0.5 AMA PRA Category 1 Credit(s)™.
Meet Your LMU-DCOM Medical Librarians

Librarians may assist LMU-DCOM clinical adjunct faculty members with literature search instruction and database advice. Both librarians, Emily Weyant and David Petersen, are located at the Harrogate, TN campus of Lincoln Memorial University and are available for consultation via phone and e-mail. For specific contact information and office hours for medical and health science librarians, please see the contact page of the Dr. Lon and Elizabeth Par Reed Health Sciences Library website at: http://library.lmunet.edu/medlib_contact. See below for more information on individual librarians.

Emily Weyant currently serves as the medical librarian at Lincoln Memorial University (LMU). She is a liaison to the medical school program at LMU. Ms. Weyant graduated with her master’s degree in library and information science from Syracuse University. Prior to arriving at LMU, she spent two years working as a library fellow at the Centers for Disease Control and Prevention in Atlanta, Georgia. Ms. Weyant is a member of the Academy of Health Information Professionals through the Medical Library Association. Her research interests include preventive medicine, point-of-care tools, and information literacy, access, and education.

David Petersen is the Health Sciences Librarian at Lincoln Memorial University (LMU). He is a liaison to the physician assistant and nursing programs. Mr. Petersen graduated from Florida State University and previously worked at Miami (FL) Children’s Hospital’s Medical Library for five years. He is a member of the Academy of Health Information Professionals (AHIP) through the Medical Library Association. His research interests center on the use of mobile technologies in healthcare, open access, and education.

Tips for Searching the Literature

In order to search literature effectively according to EBM standards, you may wish to formulate your question according to PICO(T) format. PICO(T) is an acronym that stands for population, intervention, control, outcome, and time. Unlike the other elements of PICO(T), time is not consistently used, which is why it is enclosed in parenthesis. For more complex examples, visit the University of Oxford’s Medical Literature Searching Skills page at: http://learntech.physiol.ox.ac.uk/cochrane_tutorial/cochlibd0e187.php
Library Resources
Relevant resources provided to appointed clinical adjunct faculty through the Reed Health Sciences Library.

<table>
<thead>
<tr>
<th>EBM Resources</th>
<th>Description</th>
<th>PoC Resources</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cochrane Library</td>
<td>Includes Cochrane systematic reviews, other systematic review abstracts, and more.</td>
<td>UpToDate</td>
<td>Includes original, peer-reviewed entries for 20 medical specialties to allow practitioners to keep current with new clinical developments and more.</td>
</tr>
<tr>
<td>Annual Reviews</td>
<td>Synthesizes the vast amount of primary research literature and identifies the principal contributions in your field.</td>
<td>VisualDx</td>
<td>Includes an interactive tool for finding differential diagnoses based on visual findings.</td>
</tr>
<tr>
<td>Evidence Based Medicine (BMJ)</td>
<td>Systematically searches a wide range of international medical journals applying strict criteria for the validity of research.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Resource Spotlight
Recommended free EBM and PoC resources.

<table>
<thead>
<tr>
<th>Free EBM Resources</th>
<th>Description</th>
<th>Free PoC Resources</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>NICE National Institute for Health and Care Excellence</td>
<td>Summaries of current evidence bases and best practices</td>
<td>Epocrates Apple Android</td>
<td>Drugs, diseases, interactions, and tables</td>
</tr>
<tr>
<td>BestBets</td>
<td>Provides EBM answers to specific clinical problems</td>
<td>MedScape Apple Android</td>
<td>Patient education, news, pharm info, etc.</td>
</tr>
<tr>
<td>TRIP Database Turning Research Into Practice</td>
<td>Provides special interfaces for performing a PICO search (without time) or rapid review</td>
<td>Canopy Apple</td>
<td>Medical translator - sign up for a free access code</td>
</tr>
<tr>
<td>MedScape Reference – Diseases and Conditions</td>
<td>EBM information by specialty</td>
<td>MediBabble Apple</td>
<td>Medical translator</td>
</tr>
<tr>
<td>National Guideline Clearinghouse</td>
<td>EBM clinical practice guidelines</td>
<td>QxMd Apple Android</td>
<td>Clinical calculator and decision support tool</td>
</tr>
<tr>
<td>PubMed, Clinical Queries</td>
<td>Clinical search tools</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Center for EBM</td>
<td>EBM tools and resources</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Additional Assistance
For additional assistance with library resources please contact Emily Weyant or David Petersen at Emily.Weyant@lmunet.edu and David.Petersen@lmunet.edu, respectively. You may access the library webpage at http://library.lmunet.edu/medlib.
Key Points

✓ Internet Point of Care (PoC) can be a useful tool in highlighting clinical questions, which are consistent with Healthy People 2020 initiatives.

✓ Internet PoC CME activities can facilitate active learning, reflection, self-assessment, and life-long learning habits of clinicians.

✓ Internet PoC CME offers structured, self-directed, online learning for physicians on topics relevant to their clinical practice.

✓ Medical librarians and Health Information Technology (HIT) is an essential part of PoC CME planning and learning, providing a valuable resource for clinical care decisions.

✓ Implementing PoC CME activities in your practice can impact patient care and public health and, benefit the nation’s HealthyPeople2020 initiatives.

✓ Evidence Based Medicine (EBM) relates to PoC in that it requires physicians to take an active role in finding and assessing evidence within literature.

✓ Medical and Health Science Librarians may assist physicians in performing literature searches where available.

✓ Physicians may form questions according to PICO(T) format in order to ensure that they are have a clear idea of what kinds of evidence they are looking for within the literature.

✓ The Reed Health Sciences Library at Lincoln Memorial University provides appointed clinical adjunct faculty with access to EBM and PoC resources including UpToDate and Cochrane Library.

✓ Many EBM and and PoC resources are available for free via the internet or as mobile apps that are designed for physician use in clinical care settings.
**Suggested Reading and Resources**

**Point of Care (PoC)**

Accreditation Council for Continuing Medical Education (ACCME)


**Evidence-Based Medicine**

Healthy People 2020


Continuing Education Programs:

[www.healthypeople.gov/2020/learn/ContinueEducation.aspx](http://www.healthypeople.gov/2020/learn/ContinueEducation.aspx)

Healthy People 2020 Framework:


Hudmon KS, Addleton RL, Vitale FM, Christiansen BA, Mejicano GC. Advancing public health through continuing education of health care professionals. *J Contin Educ Health Prof.* Fall;31 Suppl 1:S60-66
