Evidence-based Medical Center: the First Two Years

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Challenge
The University of Pennsylvania Health System (UPHS) is a major US academic medical center. UPHS consists of three teaching hospitals, three primary care and specialty networks, a rehabilitation nursing facility, a hospital, and two home health agencies. UPHS has a total of over 12,500 employees, and it handles over 37,000 adult admissions and nearly 1.4 million outpatient visits per year.

UPHS is also a leading center for medical research, developing and testing new diagnostic and treatments, and publishing the latest research advances into practice. There is a rich vein of clinical evidence to be mined, as well as a strong corps of clinical leaders, many of whom help develop clinical practice guidelines for national use.

With so many institutions and so many providers, the potential for variations in practice is high. Such variations can adversely affect the quality, safety, and value of care.

Establishment of CEP
The Center for Evidence-based Practice (CEP) opened in July 2001. Its mission is to summarize scientific evidence for UPHS decision making about clinical policy, and to build evidence-based collaboration strategies with outside organizations to promote patient care quality and value. The center is associated with the health system’s central management rather than one of the component hospitals. Its primary financial support comes from the office of the Chief Medical Officer (CMO).

CEP Organization
Director and co-director: one with clinical (MD) and epidemiologic (MPH) training. Part of time spent in hospital practice. Report to the Chief Medical Officer.

Research analysts (2): one with clinical (MD) and epidemiologic (MPH) training, one with research doctorate (PhD) and 13 years experience in TA.

Supporting personnel with primary appointments elsewhere:
Infectious disease specialist (MD), health economist (PhD), clinical liaison librarian (MSLIS).

Operational collaboration with the staff of the Department of Clinical Effectiveness and Quality Improvement (CEQI). CEQI supplies medical records and billing information and assists with implementation of new guidelines. Discussions as necessary with other health system staff.

Information Products
CEP presently produces three types of information products for UPHS (see table), though the lines between those types are of necessity blurred.

Guidelines: These include a standard evidence review and a set of recommendations for implementing the findings in clinical practice.

Evidence reviews: These reports range from 10 to 40 pages, and include a full literature search and meta-analysis of published trial results when appropriate.

Evidence summaries: These are short-form, quick-turnaround responses to focused questions not requiring a detailed search for primary evidence.

Process: “best evidence” approach
CEP policy is to base reports on the best evidence available. That means that, when possible, reports will be based on good-quality evidence-based guidelines or systematic reviews that have already been published. If such evidence is not available, we proceed to search for primary evidence in the clinical literature. Evidence is summarized in tables, with the most important evidence highlighted for easy identification.

Translating EBM findings into practice
In order CEP seeks to improve the quality and efficiency of care at UPHS, developing and implementing strategies for translating evidence-based conclusions into routine practice at our hospitals is a crucial part of our work. Techniques used for this purpose include:

• TA users include health system central administration, purchasing and TA process of care, as well as emerging and/or costly technologies.

Lessons learned
• A small TA center within an academic health system can provide systematic evaluations of evidence to support clinical decisions on high-impact topics.

• TA users include health system central administration, purchasing and pharmacy standing committees in the component hospitals, and physician and nursing practice leaders.

• Hospital TA topics include processes of care, as well as emerging and/or costly technologies.

<table>
<thead>
<tr>
<th>TA Type</th>
<th>Title</th>
<th>Priority</th>
<th>Completion</th>
<th>Timeframe (months)</th>
<th>TA Users</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Evidence review</td>
<td>Hypertensive Heart Disease</td>
<td>Short</td>
<td>2</td>
<td>4</td>
<td>CMO</td>
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