

Evidence-based practice model can help hospitals deliver best care, cut costs

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Amid continued pressures to minimize errors and cut costs, hospitals are continuing to scramble to find solutions to problems plaguing health systems nationwide.

A possible solution to many of those issues can be found in hospital evidence-based practice centers (EPCs), says a new Penn Medicine study suggesting EPCs can effectively inform decision-making in medical settings. In the first comprehensive assessment of the role of EPCS in decision-making in a United States hospital, study authors say EPCs can help clinical and administrative leaders understand problems and evaluate possible solutions by reviewing the available scientific literature when national guidelines are not available, thus filling a critical knowledge gap. By putting this published evidence into practice, these centers can improve quality, safety and value of medical care offered, and improve relationships between clinicians and administrators, all fostering a culture of evidence-based practice.

"Hospital EPCs are also uniquely equipped to identify and adapt national evidence-based guidelines and systematic reviews to benefit their local institutions," says Craig A. Umscheid, MD, MSCE, an assistant professor of Medicine, director of Penn Medicine's Center for Evidence-Based Practice (CEP), and senior author of the study, published online ahead of print last week in the *Journal of Hospital Medicine*. "By synthesizing this valuable data, EPCs can inform health care leaders on how to make decisions that improve care, cut costs, and achieve other positive changes throughout their operations."

Established in 2006, Penn Medicine's CEP is staffed by a hospitalist director, three research analysts, six physician and nurse liaisons, a health economist, a biostatistician, administrator, and librarians. To accomplish its mission of strengthening quality, safety, and value of care delivered at the Health System, the CEP performs rapid systematic reviews of published research, translates evidence into practice using computer-based interventions in [electronic health records](#), and educates trainees, staff, and faculty on evidence-based decision making.

While the number of hospital EPCs has grown worldwide, there are few known EPCs doing this work in the U.S. Also, the limited research available on EPCs focuses on their evaluations of technology, neglecting to take a comprehensive look at the role hospital EPCs play in integrating evidence into clinical practice.

In this study, the researchers analyzed an internal database of evidence reviews performed by the University of Pennsylvania Health System's CEP for internal requestors between July 2006 (when the CEP was established) and June 2014. The team then conducted an anonymous web survey of all of those who requested a report during the last four of the Center's eight fiscal years.

The study found that nearly 250 reports were produced in the Center's first eight years. Clinical departments, chief medical officers, and purchasing committees were the most common requestors of reports. Drugs and devices were the two most commonly reviewed types of technologies, but topics ranging from care processes, organizational systems and policies, and medical and surgical procedures were also commonly reviewed.

Examples of reviews include evaluations of the effectiveness and safety of:

- Drugs (for example, celecoxib for pain in joint replacement)
- Devices (for example, automated systems to monitor hand hygiene of hospital staff)
- Care processes (for example, how to best manage patients experiencing gastrointestinal bleeding) Reports were completed within two to three months on average, and more than 10 percent of reports were used to develop computerized interventions in the electronic health record.

The survey data of 46 respondents found that 98 percent of report requestors said the scope of the review and level of detail was "about right," and 77 percent said reports confirmed their tentative decision.

When asked whether the report informed their decision, 79 percent of requestors "agreed" or "strongly agreed," underlining the vital role of the evidence reviews. Respondents also found the reports easy to request, easy to use, timely, and relevant, resulting in high requestor satisfaction.

The most common reasons cited for requesting a report was the CEP's skills in identifying and synthesizing the available evidence, and the Center's objectivity. Authors add that this credibility underscores the value in of a neutral center in an environment where clinical departments and hospital committees may have competing interests, and where politics and external influences (including industry) may otherwise negatively influence institutional decision making.

Provided by University of Pennsylvania School of Medicine

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