

# Evidence-Based “Design” Research: A New Frontier for Military Nurse Scientists

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Just minutes outside of Washington, D.C., is a military medical treatment facility called Fort Belvoir Community Hospital (FBCH). Part of the Joint Task Force National Capital Region Medical Command, FBCH is the first in a new generation of military medical treatment facilities committed to providing patient- and family-centered care in an evidence-based design (EBD) setting.

So what is EBD? According to the Center for Health Design, “EBD is the process of basing decisions about the built environment on credible research to achieve the best possible outcomes.”

EBD presents a great opportunity for nurse scientists because it involves blending evidence-based outcomes within a research framework. In addition, EBD projects and studies often fall into the category of quality improvement or institutional review board–exempt research, which is conducive to completing numerous high-impact projects and studies quickly. Nurses often lead EBD projects and studies, giving nurse scientists the unique opportunity to collaborate with architects and Department of Facilities staff.

How do we capture and quantify EBD data?

One approach is to identify a design feature and assess whether it does what it was designed to do.

For example, FBCH has a unique color-coded way-finding system that helps staff, patients, and visitors navigate the facility. A simple way to



Fort Belvoir Community Hospital in Fort Belvoir, Virginia

quantify this system is to collect data via (1) satisfaction surveys on the ease of navigating the facility or (2) knowledge surveys in which room numbers are listed and respondents must indicate each room’s location.

A second approach to quantifying EBD results is to obtain patient, staff, or organizational outcomes as they relate to specific design features in a facility; replicate the assessment in a similar facility that lacks those features; and then assess whether a significant statistical difference exists between the two facilities.

One example of this approach is the 2011 TRICARE Management Activity–funded study Healthcare Environments–Baseline Assessment for Safety and Quality, known as the HE-BASQ study. This collaborative effort by Noblis, Inc., the Georgia Institute of Technology’s College of Architecture, and five hospitals assessed the impact of hospital design on (1) patient transport, (2) staff injuries from patient handling, and (3) noise level. The study will be

replicated at an EBD facility and the outcomes will be statistically compared to assess whether EBD made a difference. HE-BASQ Phase I findings are available at <https://facilities.health.mil/Repository?search=&searchTitles=&searchDocID=8025>.

With several military medical treatment facility building projects under way, nurse scientists are the ideal candidates to help identify and assess outcomes that will help validate taxpayers’ return on investment and the building of better hospitals for staff, warriors, and their families.

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