Evidence-Based Design methodology is a key component of the National Capital Region Medical Integrated Delivery System’s world-class facility design and is predominantly featured at its two anchor facilities—Fort Belvoir Community Hospital in Fort Belvoir, Va. and Walter Reed National Military Medical Center in Bethesda, Md. This methodology examines how features of the physical environment positively impact patient and staff outcomes. The Joint Task Force National Capital Region Medical incorporated five EBD principles into its new IDS facilities that enhance clinical processes, improve patient and staff well-being,

- Improving the quality and safety of health care;
- Enhancing the care of the whole person by providing contact with nature and positive distractions;
- Creating a positive work environment; and
- Designing for maximum standardization, future flexibility and growth.

Benefits of EBD Principles at NCR Medical IDS

The Evidence-Based Design features incorporated into the National Capital Region Medical Integrated Delivery System medical facilities were based upon proven research and results. The Joint Task Force National Capital Region Medical expects the incorporated EBD principles to:

- Support the Military Health System culture of caring through a patient/family-centered environment;
- Promote healing and patient/staff safety, and help relieve pain and reduce stress. These EBD principles include:
  - Creating a patient/family-centered environment reflecting the Military Health System culture of caring;
- Reduce the rate of airborne infections and contact-spread infections through the use of single-patient rooms, High Efficiency Particulate Air filtration and ultraviolet lights, careful placement of hand washing sinks and cubicle curtains;
- Reduce the rate of patient falls and staff injuries through the use of ceiling mounted lifts, slip-resistant flooring, grab rails, and acuity-adaptable rooms;
- Reduce medication errors through the use of dedicated work areas with appropriate lighting and sound-reducing finish materials; and
- Increase patient and staff satisfaction through the use of quieter patient rooms and corridors; patient, staff and family zones in patient rooms; emphasis on ergonomics; healthy food choices; color-coded and branded buildings; and a coordinated wayfinding and signage system.

Single-patient room with Smart Suite technology and patient lift feature in Building 10 in Bethesda, Md. (Photo by JTF CapMed)
The Fort Belvoir Community Hospital, located in Fort Belvoir, Va., is a world-class medical facility with over 1.2 million square feet, consisting of nine buildings and 3500 parking spaces. The complex includes approximately 55 clinics, 430 patient exam rooms, 10 operating rooms and 120 hospital beds.

The FBCH is at the forefront of Evidence-Based Design in the United States. The facility includes such EBD and Leadership in Energy and Environmental Design features as healing gardens, resilient rubber flooring, shortened walking distances for staff, wayfinding for enhanced navigation, acoustically absorbent finish materials for a healing environment, individual patient light and thermal controls, carbon dioxide monitoring and green power. Patients treated at this facility also have access to single-patient rooms, integrated bedside IT services for patients, wireless Internet access, electronic medical records, self-service information/wayfinding kiosks, a nurse call system, MRIs and nuclear medicine cameras.

The Walter Reed National Military Medical Center in Bethesda, Md. is a world-class medical facility with over 2 million square feet in new construction and renovations, including approximately 2500 parking spaces. The medical center houses 20 operating rooms and 345 hospital beds. The WRNMMC provides patients and staff with advanced technology such as: integrated bedside Information and communication services, a nurse call system, a Computer Assisted Rehabilitation Environment, Gait Lab, 3T and Aurora Breast MRIs, an enhanced interventional radiology capability, integrated surgical suites with Karl Storz Endoscopy Systems and daVinci Robotics, and an ultrasound transcranial doppler.

Along with new advanced technology, patients have access to Evidence-Based Design and Leadership in Energy and Environmental Design features such as single-patient rooms, a High Efficiency Particulate Air filtration system, ceiling lifts for patient and staff safety, healing environments, Ground Level Courtyard Gardens, a green roof area and water efficient landscaping.

WRNMMC is LEED Gold certified.

TomoTherapy delivers image-guided intensity-modulated radiation therapy for cancer treatment. (Photo by JTF CapMed)

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