



## Evidence- Based Design in Practice:

Healthcare Design Case  
Studies from EDAC Champion  
and Advocate Firms

Fall 2012

EBD STEPS APPLIED: 1 2 3 4

**Challenge:** In Singapore, the high demand for new acute care beds coupled with the “silver tsunami” – the rapidly growing population of elderly patients – is driving a design strategy based on acuity-adaptable inpatient environments that will allow acute care units to flex down to accommodate longer stay rehabilitation patients. For the elderly patient in a sub-acute care setting, the challenge is to mediate the stressors associated with an acute care hospital by applying design interventions to normalize the healing environment. And unlike hospitals in North America where single patient rooms are now the norm, the multi-bed room remains the standard in the public government-funded health-care system, demonstrating the need for future-proofing the inpatient environment in line with evidence-based design findings.

**Solution:** The issues central to healthcare delivery in Singapore, while certainly culturally-based and driven by a public healthcare policy framework, are in many respects universal. At Changi General Hospital, evidence-based design strategies have been interpreted and applied to optimize direct patient care time enabled by a design that is operationally efficient and also supports the family as partner in the active care and rehabilitation of the patient. Eight and twelve bed patient rooms have been re-constructed around the concept of a smaller five bed cluster complete with family area, outdoor terrace (a.k.a. healing garden), abundant natural light, and views to the outdoors. The larger unit floor plate design provides generous space for communal family engagement and on-ward rehabilitation facilities with a view to creating “healing communities” among patients and healthcare staff. Prototype mock-ups will inform the design process and post-occupancy evaluations will be conducted to test the efficacy of the design solution.



**EBD Goal:**

The program for the competition-winning Changi Hospital project includes an integrated building component that is conceived as a new paradigm for acute/sub-acute care for a growing elderly population. The goal is to provide the infrastructure/platform for flexible, acuity adaptable inpatient accommodation that actively integrates patient rehabilitation with a patient and family-centered model of care—all designed to improve healthcare outcomes and expedite the patient's return to the community.

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