



The Search for Effective Healthcare: Care Studio Exhibit

"Healthcare has become one of the defining problems of our age."- David F. Chambers, Director Healthcare Facility Research at Rice University. "Balancing cost versus access and quality has seemed unsolvable, but it does not have to be."

This message was a key focus of Chamber's workshop on the manufacturability of healthcare at the Healthcare Facilities Symposium and Expo in 2009. Chamber's vision is to standardize the built environment and supporting equipment, creating integrated systems where components are designed to operate from universal platforms, similar to how modern technology has utilized the USB interface for personal computers. Standardization removes multiple interfaces that impact interoperability and coordinated care. Creating a common platform for ancillary devices could lead to new innovative care delivery models focused on the best possible patient care at the point of service. Motivated by this concept, a small group of professionals elected to explore these ideas and LongWave Group™ was created.

LongWave Group™ is a multi-disciplinary organization of industry leaders assembled for the purpose of addressing the unsustainable model of healthcare and exploring innovative ways to create integrated platforms to promote the provision of effective and affordable healthcare.

The **Care Studio Exhibit™** is the first conceptual prototype developed by LongWave members and provides an interactive experience where thoughtful dialogue on integrating the care delivery process is explored. Today, 75 to 80 percent of the cost of healthcare is driven by direct resources provided for segregated care models requiring multiple specialty staff and complicated care coordination. Modifying the architecture and the integration of equipment in the built environment enables alternative and innovative care options. Optimizing care delivery, technology integration, and the built environment as they relate to each other, provides a new balance in this "ecosystem".

Opportunity 1: Clinical care delivery processes represents nearly three-fourths of the total cost for care. Costs for care can be significantly reduced by designing environments that focus on the alignment of care delivery, technology and the built environment. Improvement in operational processes can maximize overall quality, reduce time and movement (waste), and increase care team collaboration. Organizations can provide comprehensive single point of care models that focus on patient outcomes and increased efficiency by reducing hand offs, queues and cycle times.

Opportunity 2: Buildings become obsolete quickly, impeding functional changes to support new technology and changes in emerging services.. Sophisticated technologies with short life-cycles metabolize too fast for seamless integration into buildings designed for a 40 - 50 year operational life expectancy. Current business models require projections of patient needs and services that change based on care requirements and emerging market trends. Decoupling technology from the architecture allows for the acceleration of upgrades reflecting the latest advances. Removing complex technology and equipment from the environment and placing it on alternative platforms allows for adaptability in operating models that can more quickly respond to patient needs.

Opportunity 3: Construction is costly and disruptive to care. Construction requires a tremendous amount of time and resource from start to finish, introducing risk to patients. The Care Studio project suggests a standardized "kit of parts" from which many environments can be built. The industry increases quality, reduces cost, and decreases time to market by capitalizing on principles of manufacturing. This concept offers a high degree of variability in design aesthetic while produced with a quality of permanence.

The exhibit is not meant to define the answers, but spark dialogue for the industry to identify needed alternatives. A sustainable model for healthcare is everyone's responsibility. This exhibit is about the search for improved patient care and outcomes, increased capacity and significantly reduced cost.