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Re-Thinking Healthcare: Interviews with Industry Players



Diana Anderson, an Architect and a Resident Physician at New York-Presbyterian Hospital talks to daSILVA Architects about the “physician-architect” model, the new hybrid model that she proposes.

What is the 'dochitect' model?

The dochitect model represents a unique opportunity for architects to experience the world of medicine from a perspective that is typically

hidden. Designers can walk the halls, shadow individuals as they go about their daily routines, talk to physicians and other clinicians, but often it can be challenging to learn the intricacies of a particular profession and its practice conventions. For example, the art of the physical examination is taught with the convention of performing the exam from the right-hand side of the patient. However, I have often entered clinic rooms to find the right side of the examining table is against a wall and I cannot gain access to the patient as I was trained. Informed observations conveyed through diary-style narratives and practice anecdotes can benefit the design process and work environment.

So the physician informs the architect. To what extent does the architect inform the physician.

For clinicians, the field of Evidence-Based Design (EBD) provides a familiar methodology of evidence-based practice. The advent of EBD promotes interdisciplinary communication, as clinicians are accustomed to reading and applying research literature in their daily practice. Architects can inform the clinician by promoting an awareness of their physical surroundings and the impact on physical health and well-being. The field of medicine has become the art of managing extreme complexity and the ultra-specialization has led to the need for a collaborative environment. We are moving towards an interdisciplinary model where the physician is becoming less of a director in a patient's evaluation and treatment and more of a coordinator with the multidisciplinary team to help patients monitor their health. This complexity in care has encouraged alternative considerations for improved physiologic responses, prompting my clinical colleagues to consider architectural design and the existing evidence in their plans of care and measurement of clinical outcomes.

The importance of design can also be emphasized to clinicians as a component of quality improvement and health system change, areas currently with much attention and focus. Just as an architect's role extends beyond the client to fellow professionals, the profession and society as a whole, so too does the physician's duty to our patients and the overall health of the population. The growing field of healthcare design sends a clear message that there is a desire and a mechanism for positive change and, given the proper input, architects can help.

You have mentioned Evidence-based design. How much evidence is there?

An analogy within medicine likens keeping up with the medical literature and current evidence to drinking water from a fire hose- it is nearly impossible to do. This image becomes increasingly clear when one considers that the volume of medical literature applicable to a practicing

primary care physician includes approximately 7,287 articles published monthly in commonly read journals. It is estimated that physicians would take an estimated 627.5 hours per month to evaluate these articles.

In contrast, the field of Evidence-Based Design has by no means reached a comparable rate of publication, although it is estimated that more than 1,200 studies have linked the design of the built environment to health care quality and outcomes. Nonetheless, the attempt to stay informed as designers can be challenging and study numbers will only escalate. EBD is becoming a term known to clients who may ask for this approach having read about its purpose and application. As high-level evidence in medical planning and healthcare design becomes increasingly available, there will be more opportunities for architects and planners to modify their designs in an effort to promote and improve patient experiences and care outcomes.

How easy is it for an architect to access this type of information?

What is perhaps more important than the fire hose of information is the application of this knowledge. Many in medicine have asked the question of what causes the gap in the evidence-to-practice puzzle, something designers are beginning to consider. The medical field offers some explanations such as problems with the clinical guidelines, challenges with complexity and accessibility of evidence, difficulties with training, motivation, experience or simply lack of time. One implementation model does not fit all. Even with practice guidelines developed for evaluation and treatment of particular medical conditions, clinicians contribute a humanistic, individualized approach to patients just as designers aim to do with their projects. This reminds us to gain insight from the rigor of scientific studies while remembering to consider each situation individually and within context.

Although new standards are being integrated into design processes, opportunities are still lacking for designers to shadow clinicians, allowing a deeper understanding of healthcare delivery. Hypotheses and measurement, outcome predictions associated with design interventions and independent third party post-occupancy evaluations all enhance the rigor and standardization of the design process and allow quantitative measurement of building performance. Architects are not directly trained in research methodology, but many firms are integrating practice-based researchers to help incorporate evidence to make better design decisions, and perform outcome research which contributes to the growing evidence base.

High performance teams will likely lead the future of innovative healthcare solutions. Still needed is a model for collaboration between fields, such that designers can learn from the medical field and vice versa, further evolving the practice experience.

What made you want to become a physician after studying architecture?

As an architect, I joined the profession because of a desire to improve the environments in which people live and work. This ambition is accentuated in the area of hospital design where medical planners have the opportunity to design spaces in which people experience the most joyous of occasions, as well as times of extreme suffering and distress. Alongside design, medicine had always appealed to me as a humanistic field and offered an opportunity to help people in the most vital aspect of their lives – their health.

You often mention the two notebooks that you carry around ...?

Despite the inclusion of clinicians into the design and construction process, there can remain some disconnect between the initial vision of those who design the hospital and final clinical use of the space. Throughout my medical school years and now during my residency training I maintain two notebooks in my white coat pocket; one for the medical facts, a common finding amongst trainees, and the other for design notes and sketches. These books represent my intent to bridge the gap between architecture and medicine through the field of healthcare design.

My hybrid career began as an undergraduate architecture student, with the realization that within architectural practice there existed a subspecialty of hospital design. I can recall the first time I entered a hospital building and did not experience that uneasy sensation in the depths of my gut that most feel as they enter such an unfamiliar environment. I immediately felt at ease in the space, inspired by what I saw and determined to understand this effect of wellness initiated by the design of my surroundings. My career direction changed course that day. The hospital was the Paimio Sanatorium, built in the early 1930s in Finland, designed by Alvar Aalto. Aalto not only designed the hospital with the tuberculosis patient as the primary inspiration, but expanded his architectural solutions beyond the physical layout of the building itself. For example, Aalto believed that each patient should have his own washbasin and designed angled faucets to prevent noise and splashing; the Paimio Chair was designed to optimize the best position for the sitting tuberculosis patient to breathe.

As I went on to tour other facilities, I found myself intrigued by the biological sciences and the humanistic work that took place within hospitals, prompting me to pursue the study of medicine. Interestingly, as I began to work in health care settings as a medical student, I would often see design teams touring while I was busy rounding with the physicians and I found myself reflecting on my design experiences. I

suppose I have never been able to put both feet into the same bucket, so to speak.

I believe that hybrid professionals can provide integrated solutions which cross disciplines in new ways. By combining my background in hospital architecture with my medical education, I am committed to developing multidisciplinary approaches to improving the quality and delivery of health care

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