LEADDOC™
The Online Journal for Emerging Physician Leaders
(http://www.leaddoc.org)

July 8, 2015

Paimio Sanatorium, Finland. Photo: Leon Liao

Problem-solving through a double-barreled career

By Hannah O. Brown


Diana Anderson, MD, MArch

"One is my little black book, like all of the residents have for medical facts, and the other one is for design notes and sketches," she said. "These notebooks represent my goal to bridge the gap between architecture and medicine."

Anderson calls herself a "dochitect," a role that merges the skills of both an architect and a clinical physician. Though she works as a resident now, the idea came to her while in architectural school at McGill University in Montreal.

Raised by architect parents, Anderson said she grew up drawn to the field.

"I thought architecture was a great way to get a general education initially," she said. "It is a profession that encompasses a number of different humanistic fields, like art and engineering, philosophy, math, history, construction. I thought it was fascinating how an architect can translate somebody's vision into a built environment in the end."

Anderson became inspired while traveling in Finland during a post-undergraduate trip when the group she was traveling with visited a sanatorium for tuberculosis patients from the early 20th century. When Anderson entered the building, she felt at ease. It was the first time she had ever walked into a hospital building and managed not to feel queasy.

"I was determined to try to understand why I felt this way and how the architect could do this," she said. "It was that day that everything changed."

The building, which sat in middle of a pine forest, was designed by Finish architect Alvar Aalto. Anderson said that every part of the space was touched by Aalto's designs. Enough washbasins were installed for patients to have their own, and the faucets were angled to prevent water from splashing, making noise or exacerbating the spread of infection. He even designed a special chair, known as the Paimio chair, which situates patients at the best angle for them to recline yet still breathe without obstructed airflow.

After this experience, Anderson's interest in designing medical spaces began to grow. While her peers ventured into the world of medical planning, Anderson considered the unique knowledge that physicians carry with them.

She quoted Louie Kahn, her favorite architect, to illustrate her inspiration: "Once challenged, the architect will find completely new shapes and means to produce the hospital, but he cannot know what the doctor knows."

Her MD from the University of Toronto and current residency change that for her.

"That's really the crux of the 'dochitect' idea; it's trying to become a hybrid and know both fields," Anderson said.

Built environments have the power to dramatically affect patients' physical and psychological experiences, Anderson said.

"We now have research, which is good quantitative, scientific research, that supports the idea that improving the design of the hospital can actually play a role in reducing stress, making patients safer, promoting better clinical outcomes, enabling staff to do their jobs more effectively and just increasing the overall effectiveness of care delivery," she said.

A 1984 paper by Roger Ulrich, "View through a window may influence recovery from surgery," describes one of the first scientific studies that showed a correlation between physical space and patient outcomes.

"It really was the first time we scientifically proved the relationship between a built environment and a health outcome," Anderson said.

Ulrich observed the process of recovery in two groups of patients after gallbladder surgery. One group was given a bedside window viewing trees, while the other one looked onto a brick wall. Those with the nature view had shorter hospital stay, fewer post-surgical complications, such as nausea and headaches, and fewer doses of strong narcotic pain medication.

"The idea that nature views could enhance clinical and medical outcomes was really a breakthrough and landmark study," she said. "Now, there are several thousands published in the field."

While the hybridization of medicine and architecture has become a trending topic in some research communities, not everyone has jumped on board.

"It is happening, but it's not happening everywhere as much as it should," said Michael Pietrzak, MD.

on hospitals and began more than a year before the 9/11 attacks.

Pietrzak said he supports the work Anderson is pursuing, especially when it comes to creating an evidence base for the field.

"We are not just trying to say, 'Oh, a big window is a good idea, and it should be in every hospital in the country,' because that evidence exists for certain kinds of patients and maybe not for everybody," he said. "And, guess what? It actually hurts an eye patient, if you put them in that room. It hurts their outcome, because they don't need light, they need dark."

Many medical planners are patient-focused, but Anderson said emphasizing the experiences of hospital staff is an important element of the planning process as well.

While Anderson was in clinical training, she started to notice how clinical environments affected her during the workday and began to take notes.

"That sort of provoked the idea for the need for some kind of alliance between architecture and medicine," Anderson said. "I started thinking about ways that the architect can actually assist the doctor or the physician in health solutions."

One of Anderson's ideas is to make on-call rooms for doctors a higher priority in hospital design plans.

"Usually we include them initially in the architecture program, but often they are just considered softer spaces, and we relocate them outside of the department," she said.

The idea is especially crucial in critical care units, which Anderson said are typically very intense environments for staff because they are designed for the maximum visibility of each patient.

"There isn't really space to go and have a quiet moment as a staff member," she said.

Architects who design medical spaces face the challenge of accommodating many factors at once, but Anderson believes their success can have a profound affect on patient outcomes.

"We have the opportunity to design spaces where people experience joyous occasions as well as very intense suffering and distress on a daily basis," she said. "I think our main contribution is to transform that sort of foreign and hostile environment into a place of healing and caring."

« PREVIOUS (../2015/story1-0702.html) CURRENT » (http://www.leaddoc.org)

LeadDoc™ is produced by the American Association for Physician Leadership® (http://www.physicianleaders.org) • 400 North Ashley Dr., Suite 400, Tampa, FL 33602 • 800-562-8088 • info@physicianleaders.org (mailto:info@physicianleaders.org)