



THE NURTURE REPORT

an article



DESIGNING A BETTER CANCER CARE EXPERIENCE

New research drives improved design of oncology clinic furniture, applications, and work processes.

“Chemotherapy is hard. It’s very hard.”

Kathy Campbell, 48, recently completed her chemotherapy treatments, but her initial visit months ago to the clinic where she would receive those treatments is still fresh in her mind.

“When first I toured the clinic, they just had recliner after recliner sitting next to each other. I’m more of a private person. People would be trading stories... I wasn’t ready to hear that. It was hard enough to be diagnosed with cancer. I’d just started a new job and it was all very overwhelming.”

The physical environment of an oncology clinic is important

because the process is long and involved. Treatment sessions can last from several minutes to several hours or even days; each of Campbell’s took four to six hours. Chemotherapy works by destroying cancer cells, but the treatment can also harm healthy cells, and in turn cause nasty side effects for patients. Even though side effects improve or disappear after chemotherapy is over, the process is a difficult one for patients and their families, as well as for the caregivers.

The American Cancer Society says 1.5 million new cancer cases will be diagnosed this year, with over three-quarters of all cancers diagnosed in people age 55 and older. Since most



cancer patients are older and survival rates for most cancers continue to improve, the number of consumers for oncology care is growing.

“Everyone knows someone who’s gone through this experience. It’s a pretty easy thing to get passionate about,” says Alan Rheault, director of product design at Nurture.

The Cancer & Hematology Centers of West Michigan (CHCWM), which operates the clinic where Campbell received her treatment, is the largest private oncology/hematology medical practice in Michigan. Two years ago, they wanted to improve the design of their clinics and how they deliver oncology care, and asked Nurture to help. The research initiated by that request resulted in Sonata™, an award-winning line of casegoods designed specifically for hematology facilities, and now in use in three of the CHCWM offices. Perhaps even more important, these research and design efforts established a set of design principles that can be employed in the design of any oncology facility.

OBSERVING USERS, CREATING STORIES

The project began as all Nurture projects do, with in-depth research of the user experience. “We studied nine different oncology facilities, some urban, some suburban. Large, small, rural: we studied a range of facilities,” says Melanie Redman, design researcher at Steelcase who led the research effort that began in 2006. Its primary focus was outpatient care, the way

80% of patients receive chemotherapy.

The initial secondary research was followed by close observation of clinic entry and check-in areas, waiting areas, exam rooms, treatments areas, and staff areas including med prep, charting, and meeting spaces. The healthcare research team shadowed physicians, nurses, and other staff (“It’s amazing how multi-disciplinary cancer treatment is. It’s a team of practitioners from all different areas that come together,” says Redman), as well as observations of patients and their families. In-depth interviews and participatory design sessions with patients, staff, and family members followed.

The work took several months and led to a series of design principles and eventually design charrettes to explore product concepts and space applications. The charrettes often were an emotional experience for the people involved.

“We created stories: a day in the life of a patient, a day in the life of a healthcare provider, a day in the life of a patient partner. Then we presented the stories in the charrette. People were in tears during the brainstorming sessions. It was almost too much,” says Rheault.

“It’s pretty rare, but actually ideal when you’re designing something that can help people like this. It also presents a daunting task.”

Rheault’s design team focused on the infusion bay – the space where patients receive medications, fluids, or blood products



Nurture’s Sonata™ oncology solution is a result of research conducted (in part) at the Cancer and Hematology Centers of Western Michigan.



through an IV – as the space where Nurture could most influence the process for everyone involved.

Chemotherapy patients rarely come to their treatment sessions alone; a family member or friend usually accompanies them to provide physical and emotional support. “Family is really, really important, a huge part of the patient’s support system. Patients told us they worry about their family’s comfort. They know their family is stuck, they can’t go anywhere. It puts a lot of added stress on the patient. If we can alleviate that, that helps the patient and the family,” says Redman.

This fact is central to one of the 12 design principles the team established:

- *Care partners are integral to the healing process because they provide vital support to the patient. However, their comfort and needs are often overlooked, which can increase their stress, as well as the patient’s. Connecting care partners to appropriate resources and support can help them cope with the disruption and strain caused by their loved one’s illness. Plan for the inclusion of family in the treatment area, as well as dedicated spaces where they can relax, talk, or connect to the outside world.*

(see the sidebar for more on the design principles)

This became one of the design team’s objectives. “We wanted to give the patient more control, to create a microenvironment for the patient and their families and friends,” says Rheault.



BEYOND THE BIG, CROWDED ROOM

“Oncology clinics are often big rooms filled with recliners where the patients receive their infusion treatment. There’s little privacy, little or no support for the family, not a lot of thought given to how the space and the furniture can better support the staff and their work procedures,” says Benjamin Pratt, Nurture area sales manager. “This project turns that all around and provides a space that truly supports the patient, the family, and the staff.”

“This microenvironment is yours, you can control it. You have a feeling that ‘this is my space.’” – Alan Rheault

Sonata casegoods give patients and guests privacy without isolation through various heights, translucent panels, and modular elements that define the patient’s space and perform different functions. For example, a personal open wardrobe provides coat and sweater storage integrated into the patient’s environment. The media unit can hold a TV and DVD player and it also has a functional worksurface top and open shelf. Guests enjoy a comfortable place to sit on the Sonata bench, and there’s storage underneath.

“It’s really a kind of microenvironment for the patient, an environment within an environment. That microenvironment is yours, you can control it, have a feeling that ‘this is my space,’ and you can bring your care partner into the environment and that’s unique,” says Rheault.

“It’s more intimate. Patients used to be separated from their family/support person during treatment. Now it’s more of an experience to share together. They can play cards, watch TV together,” says Wendy Koopman, RN, senior director of clinical operations for CHCWM.

The casegoods are modular and can be planned independent of walls and building configurations. Modules attach to a common base that also routes utilities. “We’re blurring the lines between furniture and architecture intentionally, but keeping it modular. Each clinic has unique needs, so it’s designed to accommodate unique needs. We also know that the way cancer is treated will be different in five years. Technology will



change, drugs will change, how they're administered will change. So knowing that drove the design criteria. This is a modular solution that offers a range of privacy and openness," said Rheault.

Campbell preferred a private space during her visits to the clinic. "I know some people who love the sharing that goes on and others, like me, who prefer a more private area. I had my labs drawn in one of the reclining chairs in the new clinic, the nurse had all her stuff there, and I personally enjoyed the kind of half-wall (a half-fabric covered, half-glass panel). You can see the people when they're standing up."



nurses are running all the time. I think it's more organized now." She also likes how it accommodates the patient's family. "My husband came with me and there was a space for him."

She says the lobby better supports patients, too. "They divided it up better. I can kind of compartmentalize myself off to the side a little bit, do my own thing, use my laptop," she says. It also supports patients who miss the camaraderie of the old clinic and its more open atmosphere.

"Some patients miss the big room where they could chit chat. But now they use the lobby to congregate and talk. I see more patients walking around the space; they couldn't do that before. The whole suite is designed for more mobility. With this new facility, patients can have privacy or talk to other patients, whatever they prefer," says Koopman.

CHCWM has three clinics that employ Sonata and the design principles the team established: a hospital-based facility with 40 infusion bays, and two smaller clinics with 10-14 bays each. Additional locations will also take advantage of the new products and applications.

"It's better. It doesn't feel so crowded. Patients don't have to watch everyone else's treatment and they have more privacy," says Schildhouse.

Koopman looks back on the months of research and design work and says "It was time well spent. The public is demanding something other than a factory feel. No more

"THESE NURSES ARE RUNNING ALL THE TIME"

The ability of nurses to monitor patients is another consideration in designing an oncology facility. "Nurses need to be able to see the patients easily because they can have reactions to the medication," notes Koopman.

Sonata lets nurses work at the patient's side, and also supports technology and supplies. "For example, they can chart right at the patient's side, they don't have to take notes and go back to the chart at the desk. They can do the work right there," says Rheault. Sonata's nurse server has drawers for storage (all supplies are in the patient's space), pull out shelves for work and med prep, and a worksurface that can accommodate technology.

"We're proud of it, extremely happy with the space and the furniture. We are serving patients and families better." - Wendy Koopman

Although the CHCWM clinic has only been open for three months, the benefits of Sonata and the new applications are obvious. "It's easier for staff to navigate patients through the clinic, and it's easier to find patients," notes Tricia Schildhouse, senior director of operations.

Campbell noticed the difference, too. She has not only been a patient, she's also been a nurse for over 25 years. "I watch from a nurse perspective and a patient perspective. These



‘treat ‘em and street ‘em.’ This is the right direction. It’s less institutional. We’re proud of it, extremely happy with the space and the furniture. We are serving patients and families better.”

the hallways have leaves and trees on the walls, etched glass. It feels like a garden instead of a waiting room. It really helps your mental state to feel more peaceful about things.”

“I said to them about the old clinic,” recalls Campbell, “‘It’s so ugly here. It makes me sad to come here. It’s brown and bland and kind of robotic.’ The new clinic has very peaceful colors,

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DESIGN PRINCIPLES FOR CANCER CARE ENVIRONMENTS

The Sonata furniture line is one major outcome of the work of the healthcare research team fielded by Nurture. Another significant outcome is a set of twelve design principles for oncology care environments. They are design strategies that cover a wide range of issues common to these environments and the work that goes in them. For example, two of the principles are:

- **A HOLISTIC APPROACH TO CARE** Providers need to remember that they are treating a person, not just a disease. Cancer treatment demands a holistic approach that supports the patient emotionally, as well as physically. Clinical care doesn’t always address the fundamental human need for respect, dignity and security. Create spaces that allow staff and patients to integrate care for the mind, body & spirit as they deal with this life-altering disease. **A**
- **COMMUNICATION IS CRITICAL** The delivery of oncology care requires communication within a complex network of people and technologies. Staff may collaborate face-to-face on a single patient case or in a relay process, where each person’s task depends on the previous person’s work. The exchange of information that must occur happens in-person and across communication and information technology. Missing or misunderstanding information can lead to a breakdown in care delivery and even to serious medical consequences. Consider the spaces and information systems needed to enable caregivers to collaborate across roles so they can deliver comprehensive care. **B**

entering an environment that fosters a sense of community and supports a wellness lifestyle, a dramatic departure from many lobby/waiting areas that are often planned as an afterthought to the clinical spaces.

Check-in and checkout are in the same area, so staff members work in relative proximity. Questions can be answered quickly and patients moved smoothly through the registration process. Walls between desks allow patients to share personal information in a private setting. There is adequate overall space so patients waiting to register don’t intrude on those being helped. An electronic board indicates who will be served next. After registering, patients move to the wellness courtyard to wait for the nurse to call them.

Full-scaled models of many of these concepts have been tested with end users, and development continues on different products and applications. In sharing these findings with healthcare providers and architects and designers who plan oncology facilities, we invite comments and reactions to these principles and designs.

Dozens of thought starter designs have been developed to demonstrate the application of all twelve principles. One example: an entrance and lobby design supports both a more holistic approach to healthcare and better communication. It envisions the patient

