

## Design

# Innovations that enhance client care, security

The application of new technologies within the health care industry is not just focused on patient treatment but impacts multiple aspects of the patient experience as well as facility use and security. As a health care designer, collaborating with clients to take full advantage of these technologies, I am focused on recent innovations and those projected for the future. Currently, four innovations, one soon to debut, the others already available, are significantly impactful.

Telemedicine is one innovation changing the way health care is delivered. Our firm is designing a microclinic with two clinic rooms and one large consulting room for a major health care provider in Denver. Each room will be fully equipped with an integrated monitor for telemedicine visits. When a patient comes to this conveniently located neighborhood clinic, but needs to be seen by a specialist a few miles away or even hundreds of miles away, the on-site staff simply dials up the specialist, who can talk face-to-face with the patient via video conferencing. The on-site team can take vitals and even perform triage under the watchful eye of the specialist.

These retail-type clinics at multiple locations, equipped with the latest technology subtly embedded in a demountable wall system, can provide a high level of patient care to more of the population. A bonus, the sleek flat walls housing the technology are easy to clean and disinfect, a patented technology by DIRT.



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Instant messaging is not a new technology, but now applied to the physician-patient relationship it is innovative, saves time, provides convenience and bypasses crowded waiting rooms. My family's health care provider uses such a system. I have two young children who, like

all young children, frequently get sick. Using instant messaging, I can avoid the stress and expense of an office visit and communicate directly with our doctor or a colleague in the office, knowing that both have full access to our medical records. Through this system, I am able to reduce the time spent in a waiting room, potentially preventing the transmission of infection.

Another technology, new to the health care industry and a significant feature when I recently collaborated on an IT security system for a Denver clinic, is geofencing. Using RFID technology (think short-range GPS technology), geofencing creates a virtual geographical perimeter around a defined area and using software tracks mobile devices as they enter or leave the area. And it can be used to enhance the patient experience, responding immediately when a patient arrives for an appointment by sending a message to their mobile device about the status of their doctor's availabil-



Mitchell Planning

An image of the Mitchell program, set to launch in August.

ity – something like, the doctor will be ready to see you in 10 minutes; please grab a complimentary coffee at the cafe and we'll send you a message shortly. Acknowledging the patient's presence and suggesting their next step makes the visit less stressful and more patient friendly. As a designer or facility owner, we are able to reduce the size or eliminate a waiting room all together, allowing for more usable clinical space to better serve patients.

Taking it a step further, a new asset management and tracking system developed by Mitchell Planning, working with three hospital CEOs and one member of Homeland Security, is set to launch in August of this year. Based on RFID technology, the new system tracks people and assets within a health care facility's geofence. Using a map, similar to "Harry Potter's" Marauders Map, the software tracks the

movements of known persons with one color, unknowns with another color and with a third color indicates risks – unidentified or unauthorized persons at the facility or in restricted zones. When someone passes into a restricted zone, the system immediately alerts security and, if necessary, can even shut the doors and quarantine the threat. Implemented on a facility's existing security platform, the software is attached to the Wi-Fi system, adding about 1 percent load to the network.

Since Homeland Security and the FBI have identified hospitals as soft targets for domestic and international terrorism, the potential value of tracking is huge. Currently little to no tracking of visitors is done in most health care facilities. Dressed in business attire and carrying a roll of building plans under my arm, I

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