

## Tech innovations advance telehealth market



In 2014, investors put nearly \$7 billion toward the development

of digital health technology, and rightfully so; as technology expands its reach into more sectors, we will soon see a very new paradigm for healthcare delivery in the U.S.

[Telehealth](#) saves the country valuable dollars, makes patients' lives easier, improves health outcomes, and even reduces the country's carbon footprint. But it has not yet reached its full potential. We're just on the brink of the transformation telehealth will cause the healthcare industry to undergo. Innovative companies offering 21st century patient-care platforms, like the ones highlighted below, are designing solutions before the public can imagine them.

[Technological developments](#) that make our lives easier in other industries have metastasized to healthcare. Telehealth is poised to become the new normal, with technology from digital health companies paving the way to a very different future.

## Innovation

One innovation that doctors will be able to take advantage of came not from a healthcare company, but from Microsoft. Originally built to enhance gamers' experience using the Xbox 360, the Kinect motion sensor is a human skeletal tracking system that can be used to monitor musculoskeletal health. Bill Crounse, MD and Senior Director for Worldwide Health at Microsoft Corporation, said, "I have seen Kinect being used in applications for physical medicine and rehabilitation, pre and post-surgical evaluations, and many other medical behavioral health problems in countries around the world." This technology is one example of how technology from other industries can be re-adapted for use in healthcare.

## Digital health companies to watch

Dr. Andrey Ostrovsky, CEO of Care at Hand, believes telehealth will become as common in the U.S. as vaccinations and x-rays within the next few years. Care at Hand aims to create disruptive technology that will help eliminate health care disparities for vulnerable populations. It uses mobile care coordination to reduce hospital re-admissions by connecting patients with nurse care managers, health coaches and home care workers.

RespondWell is a digital health company that works in the telerehabilitation space. CEO Ted Spooner is a pioneer who founded one of the first online banking systems, called Corillian, in 1995. RespondWell helps patients get rehabilitation services from home, improving outcomes and lowering costs; the U.S. spends over \$26.6 billion a year on physical therapy, a number that could drastically shrink if RespondWell is widely adopted.

[In 2011, total healthcare expenses for the elderly amounted to \\$414.3 billion.](#) A company called Unaliwear has



created a voice-controlled wearable medical device for the elderly, called the Kanega watch. CEO Jean Anne Booth says medication non-compliance causes 38% of nursing home admissions and 10% of hospitalizations; reducing these unnecessary admissions would substantially reduce costs. The watch provides medication alerts to help prevent non-compliance, and also detects if the wearer has fallen, since falls are the leading cause of death from injury in people 65 and older. The Kanega watch aims to keep seniors independent, active and safe with a simple, intuitive and stylish device.

Conversahealth was founded on the belief that “health happens between visits,” that periodic visits to the doctor’s office are not enough to keep patients healthy. The platform enables digital checkups to ensure an ongoing dialogue between patients and physicians. It’s HIPAA-compliant but integrates data from multiple sources, helping all parties track important test results and health data. By helping patients stay on track without requiring unnecessary office visits, it leads to better outcomes at a lower cost.

Empower-Interactive.com is an interactive psychotherapy application that offers behavioral health solutions in a digital format. It enables patients to work through psycho-education at their own pace and on their own time. Using the evidence-based methodology of cognitive-behavioral therapy (CBT), it improves the health and well-being of users by teaching them coping skills to deal with stress, anxiety or depression.

Health123 empowers patients with the medical information they need, when they need it. The platform offers personalized care plans and medical checklists, as well as a direct connection to reach the care team. “Most practices are like ours – extremely busy and time with patients is always constrained,” says Dr. Sarah de la Torre, a Seattle OB/GYN. “Implementing Health123’s platform allows care staff to focus attention on those most in need while empowering the rest with on demand access to completely personalized information and services.”

## Impact

Time will tell to what extent applications like the ones described above will improve health outcomes, make healthcare more equitable, and reduce costs in the future. But as of 2015, studies have shown that telehealth is already making waves in these areas. A study in the June 2012 edition of Health Affairs found that costs for “hospital at home” patients were 19% lower than for hospitalized patients, with no sacrifice in treatment efficacy compared to inpatients. A September 2011 study in the same journal found that a care management program called the Health Buddy Program reduced healthcare spending in people with chronic diseases by 7.7-13.3 percent per person per quarter. An October 2011 paper published in Health Affairs found that innovations by the Indian Health Service, a federal health system, reduced health disparities in American Indian and Alaskan native people. And a 2008 review and meta-analysis of home-based telehealth concluded that telehealth positively impacts clinical outcomes.

As digital health companies disrupt the healthcare space, researchers must continue to study and monitor the impacts of these technologies. For now, we should all keep an eye out for how we can integrate these telehealth innovations into our own care.

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