

Making Apps Sticky: Bridging the Doctor/Patient Gap By Design

John Nosta, Forbes
October 4, 2013

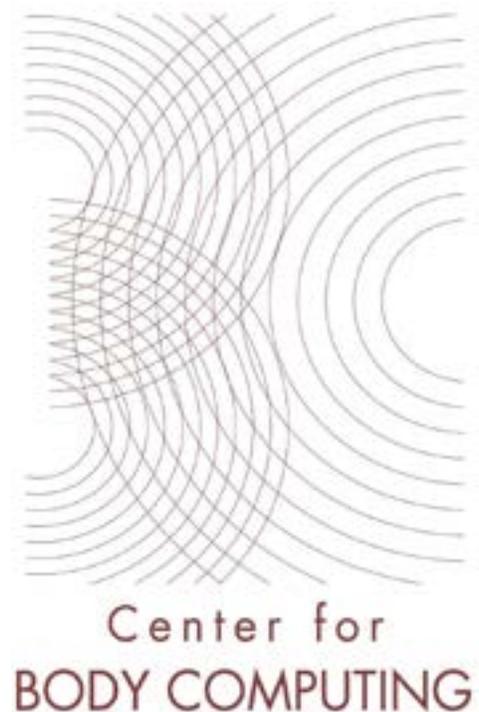
Tomorrow is the 7th Annual [USC Body Computing Conference](#). The USC Center for Body Computing is a digital health research and innovation center and the conference will include discussions about sensors, sports biostatistics, cloud computing, venture capital opportunities, and using mobile technology to help solve pressing global issues, such as human trafficking.

In recognition of this important meeting, this is a guest post by [Leslie Saxon, MD](#), the Chief of Cardiovascular Medicine at the Keck School of Medicine of USC, and the Executive Director of the USC Center for Body Computing, a digital health research and innovation center and [Stuart Karten](#), the principal of Karten Design, a product innovation consultancy creating positive experiences between people and products through design research, industrial design, and engineering.

Physicians have a limited time to spend with patients—approximately 8 minutes per visit. 480 measly seconds to make life choices.

The limited amount of time makes it difficult to develop trust, process a person's medical history, to have a real discussion. While there are a number of reasons why this happens in American medicine, the physician-patient time crunch will only get worse because of the aging population and the rise of chronic conditions. Amazing tools exist right now to assure the parent of a juvenile diabetic that their kid is safe. There are pieces out there to provide the tools for every diabetic to manage the complexities of their disease as part of an integrated experience around a commercial consumer mobile device that they are already using multiple times a day. There are networks in place - connecting billions of people. There are stunning opportunities available in cardiology right now. For example, we could create the largest database of heart rate behavior in history. But digital health is a little stuck, and going through some growing pains. Technologists have engineered some incredible technology, such as sensors. But digital health is at a critical stage in which it needs to start creating experiences around this technology. It needs design, and it needs designers to become part of the development process.

Yep, there are millions of health apps, most of which are connected to smart phones, or other digital devices such as the FitBit, Nike Fuel Band, or Jawbone Up. These simple, consumer-friendly apps have established an interest in personal metrics for millions of people, as well as established an expectation for a well-designed user interaction. As the lines between medical and consumer products blur, people have come to expect that there's an app for everything, that they have access to all information, and that information is presented in a simple, straightforward manner that they can comprehend. The medical industry hasn't quite caught up, but we're starting to see device makers and others try and understand how to establish products that address patient needs, not physician needs. Maybe even make a product fun, or entertaining, or connected to existing social networks, like Instagram. This is actually a radical notion in medicine.



In many cases, these apps will be connected to complex medical devices, worn or implanted, that are prescribed by doctors. Such devices are capable of capturing and triangulating multiple signals, and learning about patients to produce insights into their symptoms and behaviors. In this context, designers can use their expertise in emotion and behavior to serve as a translator between the needs of doctors and patients.

Earlier this year Karten Design and the USC Center for Body Computing teamed together to help Boston Scientific create a concept app, Heart Coach. The design attempts to empower heart failure patients with implantable cardiac defibrillators by providing them with a digital coach for managing their heart health. The app uses progressive disclosure, algorithms, and coaching to actively engage patients in positive behavior change.

From our very first meeting, we wanted to make the app “sticky,” creating a compelling experience that encouraged users to check in with this app every day as a new “keystone habit”—a simple change that has a cascading impact on a person’s life. For example, a weight gain of more than two pounds over a 24-hour period, combined with decreased activity during the night, often means that a patient has missed a dose of medication. These two concurrent incidents would trigger the app to ask a patient, “Would you like some help tracking your medication?” Without the app, this type of important information might not complete the information loop, which can lead to hospitalization. This is a philosophic change in the flow of information: data used to only go to the physician, if at all. This kind of circle of information is needed if an app is going to produce behavior change.

As designers begin creating more and more health apps, it is going to be a fascinating time to see how design impacts healthy behaviors. In many ways, this is a fresh start for designers. There is a saying that “the Internet missed medicine,” but from what we see, digital technology and good design is starting to become a significant part of new medical design. Mobile phones are so ubiquitous that people want to use them as Tricorder-like devices—the cool sci-fi device from Star Trek. It really is a profound moment: design can help millions, if not billions of people. Designers are being presented with an enormous opportunity, and responsibility. Good design can literally change the world, for the better, to comfort the sick, to keep people healthier, to bring more humanity into medicine.

Keep Critical! Follow me on [Twitter](#) and stay healthy!