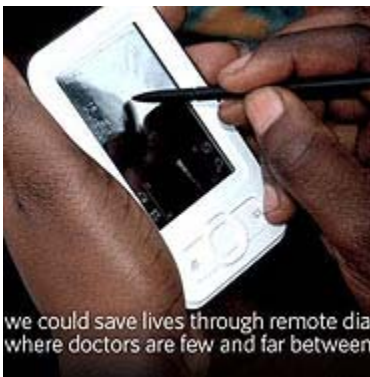


Mobile revolutionizing healthcare: CTIA keynote

By [Dan Butcher](#)

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What if we could save lives with wireless technology?

LAS VEGAS - Mobile devices and wireless technology are revolutionizing the healthcare industry, according to a keynote presentation at the CTIA Wireless 2009: Mobile Life conference.

Wireless technologies are providing convergence, remote monitoring of patients and the means to provide individualized medicine, among a variety of other benefits. While the top five life-changers are currently the Internet, PCs and laptops, mobile phones, email, and DNA testing and sequencing, by 2015, it will be wireless medicine, according to the keynote.

“Mobile health is one of the most exciting things I’ve ever experienced, and wireless has potential to change the future of medicine,” said Eric J. Topol, M.D., director of the Scripps Translational Science Institute and the chief academic officer of Scripps Health. “Right now we have a problem, the economy has hit rock bottom, but at the same time, we’ve never had more innovation in wireless medicine.

“Wireless monitoring of the patient’s biology will help us get rid of the waste and get rid of the one-size-fits-all mentality that is so wrong,” he said. “Wireless technology will enable consumer-driven healthcare, giving them power through their own mobile device.

“There is no better potential solution, and wireless will revolutionize medicine.”



Eric J. Topol, M.D., is the chief academic officer of Scripps Health

There are many healthcare problems that potentially have wireless solutions, according to Dr. Topol. President Obama recently cited a statistic that the crushing costs of healthcare causes a bankruptcy every 30 seconds.

The U.S. spends \$2.2 trillion on healthcare, 16 percent of GDP, but ranked just 19th in the world in quality of healthcare services.

“We have to ask ourselves, ‘How can we change the world?’ and realize the incredible potential of digital wireless medical devices, which can be used to monitor high-risk pregnancies and deliveries, medication compliance, the quality of patients’ sleep and level of sociability, and metabolic fitness

programs,” Dr. Topol said.

For example, Triage Wireless developed an on-the-wrist device that measures all of a patient’s vital signs.

“Wireless can transform one’s home into an intensive care unit,” Dr. Topol said. “It will be transformative for health care, causing a veritable sea change in the way medicine can be practiced and the way treatment can be dispensed in the years ahead.

“The momentum of mHealth, Mobile Health or Health 2.0 is extraordinary,” he said. “Devices in use today have contributed greatly.

“For example, there will be an application for glucose and blood pressure monitoring on the iPhone in the next few months.”

The Pill Phone uses wireless technology to remind people to take their prescribed pills on time. It notifies patients’ caregivers automatically if they don’t keep to their schedule.

Johnson and Johnson is developing “smart band-aids” with peripheral wireless sensors.

Corventis has received FDA approval for a continually streaming electro-cardiogram, which uses wireless technology to give physicians the ability to



Mobile helping people get healthcare

remotely monitor someone with heart failure, without having them come into the office.

Hospitals can use similar wireless technology to reduce the need for beds via remote monitoring.

Dr. Topol envisions wireless technology playing a key role across the entire continuum of care, from pre-hospital/in-ambulance to the ER and ICU to hospitals beds, step-down, out-patient clinics and, eventually, home.

“There is extraordinary potential,” Dr. Topol said. “ICUs now are a spaghetti of wires, but the future is no wires, just a wristband.”

“The nurse has on her wristband information for all of the patients she’s monitoring, with an alarm if something’s out of the ordinary,” he said. “Out-patient clinics can enable mobile phone video chats for consultation on any network, any device, anywhere, and wireless can help to reduce patient visits to doctors’ offices.”

“While en route to a hospital, EMS can transmit vital data via mobile broadband.”

What do the advancements in medical technology mean for the future of medicine? For one, wireless networks could help the elderly avoid assisted living.

“An elderly patient monition system using a wireless sensor network is being developed, which is such a vital step for the future, but it’s not just for seniors,” Dr. Topol said. “A ‘smart home’ of the future will have wireless monitoring to measure when vital signs are going in the wrong direction.”

“There will be much broader applications in the years ahead,” he said.

The United Nations Foundation and the Vodafone Foundation are collaborating on mHealth for Development, relying on ubiquitous presence of mobile devices to improve healthcare in the developing world.

The initiative is changing mobile phones into a lab to detect anemia, malaria and other diseases and to provide education and remote monitoring.

Gary and Mary West Wireless Health Institute

Dr. Topol announced that the Gary and Mary West Foundation has committed \$45 million to create the [West Wireless Health Institute](#), one of world’s first medical research organizations dedicated to advancing health and well-being through the use of wireless technologies.

Scripps Health has signed on as the founding healthcare affiliate, with Qualcomm as a founding sponsor.

Gary West is Founder and Chair of the Institute's board of directors. He will be joined on the board by Dr. Topol, who is holder of the Gary and Mary West Chair of Innovative Medicine, and Donald Jones, vice president of Health and Life Sciences at Qualcomm.

Under the leadership of Dr. Topol, the institute and its research team will conduct clinical research on solutions to better prevent, diagnose, manage and treat major health conditions, ranging from Alzheimer's to heart disease to obesity.

The institute will build a base of biomedical and bioengineering expertise to ensure that devices in development improve the existing level of care, and are safe, reliable and cost-effective.

"The rapid and remarkable progress in wireless sensors—continuously tracking important parameters such as blood sugar, blood pressure, all vital signs, sleep state and even caloric intake and expenditure—has the potential to change medicine in a radical and unprecedented way," said Dr. Topol.

"Not only does this fit the optimal models of individualized and consumer-driven health care, but there is tremendous potential to upgrade quality of care, reduce the cost burden and shift away from reactive to preventive medicine," he said.

Staff Reporter Dan Butcher covers banking and payments, carrier networks, commerce, database/CRM, manufacturers, music and software and technology. Reach him at dan@mobilemarketer.com.