

## Overview: The Wireless Industry's mHealth Focus

The healthcare industry, elected officials and the medical community face tremendous challenges in trying to solve America's healthcare challenges. Regardless, everyone agrees that the **time to solve them is now.**

Medical and policy experts also agree that the wireless industry is a key component in the healthcare "fix." Considering America has more than 270 million wireless subscribers and there are more than 4.1 billion in the world with wireless access, "mHealth" solutions are vital to making healthcare more efficient, effective and patient-focused.

### **THE U.S. HEALTHCARE SITUATION**

- In 2007, 60% of U.S. bankruptcies were caused by medical costs.<sup>i</sup>
- The U.S. spends more than any other industrialized country in the world on healthcare (approximately \$2.2 trillion every year).<sup>ii</sup>
- \$1.4 trillion, or about 75% of the nation's healthcare spend, is on treating chronic conditions (defined as heart disease, diabetes, cancer, stroke or chronic obstructive pulmonary disease).<sup>iii</sup> This equals to about \$5,300 per person each year.<sup>iv</sup>
  - More than 45% of Americans suffer from at least one or more chronic conditions.<sup>v</sup>
  - Approximately 25% of the population has multiple conditions.<sup>vi</sup>
  - Medicare spends about 96 cents per dollar while Medicaid spends about 83 cents per dollar on chronic conditions.<sup>vii</sup>

### **WIRELESS: AN ANTIDOTE**

- Right now, there are commercial off-the-shelf applications and technology available such as text messaging and mobile voice that encourage healthy behavior, such as patient prompts to take medication, follow a certain diet, engage in physical activity, check glucose levels, take blood pressure, detect cardiac arrhythmias and more.
- By making healthcare more personal and individualized, mHealth solutions are expected to significantly improve the medical community's ability to identify and resolve epidemics, reduce medical errors and expand preventive healthcare.
- mHealth will allow the millions of Americans living in remote, rural areas to "visit" the best doctors' offices in the country, eliminating healthcare disparities based on geographic location and economic differences.
- If patients suffering from chronic conditions agree to have their doctor monitor them remotely via mobile wireless applications, (i.e. monitor patients' health and track and guide self-care beyond the doctors' offices), the reduced costs for emergency care, hospitalization and nursing home care would amount to \$21.1 billion in savings.<sup>viii</sup>

### **REAL-LIFE EXAMPLES OF mHEALTH WIRELESS SOLUTIONS**

In June 2009, CTIA hosted the "mHealth Solutions and Policy Forum" in Washington, D.C., where medical and policy experts discussed how wireless is an integral part of the healthcare solution. At the Forum, speakers discussed a number of solutions, including some that they were directly involved in shaping and/or developing. You may view video highlights of that forum on our website at [www.ctia.org/advocacy/mHealth2009](http://www.ctia.org/advocacy/mHealth2009). The panelists included:

- **Dan Fletcher, PhD; White House Office of Science and Technology Policy** – oversaw the development of the CellScope, a cameraphone-microscope. The device takes focused pictures at up to 50x magnification, enough to see red blood cells and the Plasmodium parasite that causes malaria. Modified versions of the scope can also diagnose tuberculosis, skin conditions, dangerous insect bites and abnormal mole growth
- **Jonathan Javitt, M.D., MPH; CEO, Telcare** – helped develop the Telcheck™, a glucose meter which transmits daily glucose readings to a patient's caregiver (e.g. physician, nurse/case manager or pharmacist) and relays daily coaching to the patient. It may also be used to link a child with diabetes to a parent or an elderly parent with diabetes to an adult child. In addition, Telcare will launch the Telflo™ wireless peak flow meter for asthma which combines monitoring technology with wireless communications. Physicians and parents will

be alerted when a child falls below respiratory flow safe levels or when a child stops testing in the prescribed manner.

- **Justin Sims**; CEO, **Voxiva** – Voxiva’s mHealth applications include appointment reminders, sent via SMS (text), email or phone. Reminders can be two-way so patients can either confirm or cancel their appointments. They also offer “daily diaries,” a personal record to keep track of treatments which can be accessed through the phone, text messages or through a web interface to review or to share with others, such as healthcare providers to confirm medicine compliance.
- **Richard J. Katz**, M.D.; Director, Division of Cardiology and Director, Cheney Cardiovascular Institute, **The George Washington University Hospital** – principle investigator for a trial using the “Pill Phone” to improve medication adherence of hypertensive medications in a Medicaid population. He is also principle investigator for “DC Health Connect,” a cell phone program to manage diabetes and hypertension in Washington, DC health clinics.
- **Jay Bernhardt**, M.D.; Director, Center for National Health Marketing, **Centers for Disease Control (CDC)** – currently using emerging mobile technologies to increase the dissemination and potential impact of CDC’s science by reaching wider and more diverse audiences, and tailoring specific health messages to meet unique challenges, such as the response to H1N1 and natural disasters such as hurricanes. The CDC is using mobile technology to facilitate interactive communication and community - thereby empowering people to make healthier and safer decisions.

#### **U.S. POLICYMAKERS ROLE IN mHEALTH**

Policymakers can enable an increased growth in wireless mHealth innovations and deployment and set the stage for even more dramatic chances in personal and public health, and cost savings.

1. Ensure federal healthcare reforms encourage the implementation of mHealth solutions and are made accessible to millions of Americans, especially for preventive care. These kinds of policies are critical to the medical and wireless industry’s efforts to bring better healthcare services to millions of needing Americans.
  - For example, “meaningful use” definition needs to include mHealth solutions.
  - Medicare revisions need to be implemented to add mHealth solutions as being covered services subject to reimbursement.
2. Encourage legislative and regulatory actions that recognize the unique and invaluable role wireless broadband – it’s anywhere, anytime availability – can play in providing Americans with equal access to cutting-edge communications and continued contributions to the economic growth of the country.
  - To enhance wireless coverage throughout the country and In order for wireless carriers to build and maintain network infrastructure to meet the growing demand for advance wireless technology while still providing reliable service, CTIA is asking for a tower siting policy which would establish a timeframe for zoning authorities to act on applications (45 days for collocation; 75 days for other facilities).
  - There is currently no timeframe. Of the 3,300 tower and antenna applications pending in the spring of 2008 for 7 wireless carriers, 760 were pending for more than one year. 180 were pending for more than three years. 135 of the 180 applications pending for more than three years are collocation applications where towers have already been approved.<sup>ix</sup>
3. Remove the excessive and discriminatory taxes on wireless users, and place a 5-year moratorium on any new taxes by passing the Cell Tax Fairness Act.
  - The average wireless consumer pays more than 15% in taxes and fees on their monthly wireless bill.
  - Wireless consumers have been taxed four times more than other taxable goods and services over an almost four-year period.
  - Last year, Americans paid nearly \$21 billion in federal, state and local wireless taxes and fees.
  - Economists estimate that a 3.3% decrease in wireless prices would increase U.S. Gross Domestic Product by between \$6.8 billion and \$7.8 billion within two years.<sup>x</sup>

- Mobile broadband service deployment needs to be encouraged by keeping costs affordable for consumers (individuals and businesses). This includes a fair and reasonable tax regime.
  - Such excessive and arbitrary taxation is regressive, discouraging wireless use by many consumers such as those on fixed or low incomes, and could be among the group who would benefit the most from wireless mHealth applications.
4. Identify and auction spectrum – the backbone of the wireless industry.
- Spectrum is the key to the “virtuous cycle” – meaning as long as more spectrum is available, the industry will continue to invest in networks to handle more capacity, device manufacturers will continue to develop new capabilities for handsets and content developers will continue to create new apps and content – which ultimately benefits the consumers who continue to want and expect more from their mobile devices. This is a cycle that never ends as long as spectrum is made available.
  - As the adoption of more capable devices with more apps continues to proliferate, an important first step in designating the valuable spectrum these applications need is to have Congress pass the bipartisan Senate and House Radio Spectrum Inventory Act.

<sup>i</sup> See Alice Park, “This Doctor Does Not Want to See You”, *available at* [http://www.time.com/time/specials/packages/article/0,28804,1903873\\_1903925\\_1903787,00.html](http://www.time.com/time/specials/packages/article/0,28804,1903873_1903925_1903787,00.html) (last accessed August 3, 2009).

<sup>ii</sup> See Bob Lyke, “Health Care Reform: An Introduction”, April 2009, *available at* [http://assets.opencrs.com/rpts/R40517\\_20090414.pdf](http://assets.opencrs.com/rpts/R40517_20090414.pdf) (last accessed August 3, 2009).

<sup>iii</sup> See “Partnership to Fight Chronic Disease”, *available at* <http://www.fightchronicdisease.org/issues/about.cfm> (last accessed August 3, 2009).

<sup>iv</sup> *Id.*

<sup>v</sup> *Id.*

<sup>vi</sup> See Will Dunham, “More Americans getting multiple chronic illnesses”, Jan. 6 2009, *available at* <http://www.reuters.com/article/domesticNews/idUSTRE5050S920090106> (last accessed August 3, 2009).

<sup>vii</sup> Partnership, *supra* note 5.

<sup>viii</sup> See Richard Adler, “Health Care Unplugged: The Evolving Role of Wireless Technology”, Nov. 2007, *available at* <http://www.chcf.org/topics/view.cfm?itemID=133517> (last accessed August 3, 2009).

<sup>ix</sup> See President-Elect Obama Transition Team Wireless Industry Briefing, December 2008, *available at* [http://files.ctia.org/pdf/President\\_Obama\\_Transition\\_Team\\_Briefing\\_Presentation\\_Slides.pdf](http://files.ctia.org/pdf/President_Obama_Transition_Team_Briefing_Presentation_Slides.pdf) (last accessed August 3, 2009).

<sup>x</sup> See CTIA Policy Topics: Taxes, Fees and Surcharges, *available at* [http://www.ctia.org/advocacy/policy\\_topics/topic.cfm/TID/27](http://www.ctia.org/advocacy/policy_topics/topic.cfm/TID/27) (last accessed August 3, 2009).