THE COMMITTEE ON ENERGY AND COMMERCE

MEMORANDUM

July 15, 2014

To: Members, Communications and Technology and Health Subcommittees

From: Majority Committee Staff

Re: "21st Century Technology for 21st Century Cures"

On Thursday, July 17, 2014, the Subcommittee on Communications and Technology and the Subcommittee on Health will hold a hearing entitled "21st Century Technology for 21st Century Cures." This joint subcommittee hearing will convene at 9:30 a.m. in 2123 Rayburn House Office Building. Below is background on the hearing.

I. Witnesses

1. Robert Jarrin, Senior Director, Government Affairs, Qualcomm Incorporated;
2. Paul Misener, Vice President, Global Public Policy, Amazon;
3. Dr. Jonathan Niloff, Chief Medical Officer and Vice President, McKesson Connected Care and Analytics, McKesson Corporation;
4. Dan Riskin, Founder, Health Fidelity; and,
5. Dave Vockell, Chief Executive Officer, LyfeChannel.

II. Background

The technology sector of our economy has long been one of the most pioneering and dynamic, bringing unparalleled innovation to nearly every sector of our economy that relies on communications. Transportation, entertainment, education, and agriculture have all seen incredible benefits from the integration of modern connected and mobile technologies. Now, as smartphones continue to proliferate on modern wireless networks, consumers are carrying an always-connected computer in their pockets and purses these technologies are poised to spur additional innovation in the health sector.

The evolution of personal computing devices from the personal computers of the late 1970s to the high-powered, paper-thin tablets of today is just one of the stories that illustrates the progress of technology and its reach into nearly every facet of modern life. In addition to the advancements in equipment and content, there has been explosive growth in adoption of these technologies. According to the Pew Internet Project, 90 percent of American adults have a cell phone, and 58 percent of adults have a smart phone.

Concurrent with the growth in technology has been the increased opportunity for engagement through that technology. Platforms now allow developers to create applications for wide, low-

cost distribution. Both Apple's iOS App Store and Google Play have more than 1.2 million apps each, an increase of 300,000 for Apple in just over a year. There are now millions of app developers who can leverage their technological expertise and innovative thinking to create apps that range from purely entertaining to eminently practical. These devices and applications offer users the opportunity to improve their lifestyle by tracking things about their daily lives, like steps, calorie intake, and heart rate, and presenting the data in useful ways. By being more aware of their habits, lifestyles, and health and fitness data, patients can be empowered to take an active role in their personal health and reduce the strain on the health care system.

These modern advances in technology have also opened up a myriad of possibilities when it comes to the discovery, development, and delivery of 21st Century Cures. Digital technologies are swiftly making it possible for researchers and clinicians to identify health problems before they become critical. And recent advances in biomedical research have let researchers harness health data in order to better target treatments and improve outcomes. Taken together, these advances hold the potential to demonstrate effectiveness not based physical indicators and symptoms, but by understanding the underlying causes in our everyday lives. To that end, the National Academy of Sciences recently called for an ambitious effort to transform diagnosis through precision medicine – using genomic, epigenomic, exposure, and other data to define individual patterns of disease and craft better individual treatments.[1]

The potential benefits of the use of new technologies go well beyond the goals of identifying and targeting better individual treatments. The ability to access real time data through the use of wireless sensors could allow clinicians to improve the quality and efficiency of clinical trials, help researchers design targeted therapies, and inform research and development efforts.

Leveraging the expertise of technology companies will allow health researchers and clinicians to more efficiently share data and communicate – effectively expanding the scope of the medical community. Moreover, using existing technology to make high quality research widely available creates an environment for collaborative development of better health solutions at reduced cost.

The hearing will invite testimony and focus on the types of disruptive communications technologies that are currently transforming other sectors of our economy and being developed for the health sector, and explore how companies are harnessing the innovations in communications technology to improve patient outcomes and spur advances in health care.

If you need more information, please call David Redl or Clay Alspach at 202-225-2927.

[1] National Research Council. *Toward Precision Medicine: Building a Knowledge Network for Biomedical Research and a New Taxonomy of Disease*. Washington, DC: The National Academies Press, 2011.