

## FCC CHAIRMAN UNVEILS PROPOSAL TO SPUR INNOVATION IN MEDICAL BODY AREA NETWORKS, TO TRANSFORM PATIENT CARE, AND LOWER HEALTH CARE COSTS

### NEW RULES WOULD MAKE U.S. FIRST IN THE WORLD TO ALLOCATE SPECTRUM FOR WIRELESS MEDICAL BODY AREA NETWORKS

#### GENERAL ELECTRIC HEALTHCARE, PHILIPS HEALTHCARE JOIN CHAIRMAN AT GW HOSPITAL TO DISCUSS THE FUTURE OF WIRELESS HEALTH TECHNOLOGY

*Today, Chairman Genachowski was joined by GE Healthcare and Philips Healthcare at the George Washington University Hospital in Washington D.C., to announce that the FCC will consider new rules to allow greater use of spectrum for Medical Body Area Network (MBAN) devices, spurring innovation and development of new wireless health technologies. These new rules would make the United States the first country in the world to allocate spectrum for MBAN devices. Greater access to spectrum can revolutionize the health care industry, reducing the cost, and increasing the effectiveness of patient monitoring.*

#### **I. Next week at its Commission meeting, the FCC will consider adopting new rules permitting more intensive use of spectrum for wireless medical devices, making the U.S. the first country in the world to dedicate spectrum for Medical Body Area Networks in hospitals, clinics, and doctors' offices.**

- This proposal is a multi-industry effort to foster innovation in this spectrum band (2360-2400 MHz) by allowing distinct but compatible users to share.
- This creative use of spectrum provides wireless health manufacturers with *increased spectrum capacity and reliability*, giving them the certainty they need to streamline their product development, which for many years operated on a variety of frequencies.

#### **II. Demonstrations of MBAN Technology**

- *Fetal Telemetry*: A small, lightweight, and noninvasive way to continuously monitor a baby's health, while allowing the mother to move freely.
- *LifeLine Home Care Pendants*: A device that collects health information for the elderly or those with chronic diseases—allowing them to live independently with the security and peace of mind that they are being monitored.
- *Predictive and Early Warning Systems*: Provides continuous monitoring to help prevent sudden and acute deterioration of a patient's condition.
- For more information on MBAN innovation from Philips and GE, please visit [Philips Healthcare](#) and [General Electric Healthcare](#).

#### **III. Transforming Patient Care, Saving Lives**

- Almost 50% of all patients in US hospitals are not monitored. MBANs provide a cost effective way to monitor every patient in a healthcare institution, so clinicians *can provide real-time and accurate data*, allowing them to intervene and save lives.
- MBANs allow for ubiquitous and reliable monitoring, and give health care providers the chance to identify life-threatening problems or events before they occur. According to Philips Healthcare, a monitored hospital patient has a 48% chance of surviving a cardiac arrest—this number plummets as low as 6% without monitoring.<sup>1</sup>
- Parts of MBAN spectrum can also be used outside the hospital and in patients' homes. Monitoring a patient at home saves money by reducing readmission rates.
- With in-home patient monitoring, premature babies could come home a little sooner, a father struggling with heart disease can be aware of his condition and still make his kids' soccer game, and a grandmother living alone could stay in her home and keep her independence.

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<sup>1</sup> Philips Healthcare

- MBAN-equipped devices will allow patients *greater independence and mobility*, both in the hospital and in the home—leading to a higher level of comfort and care.

#### IV. Driving Down Costs

- With MBAN technology, physicians can intervene before a patient’s condition seriously deteriorates—resulting in less time spent in the intensive care unit, and can reduce costly follow up visits. One health care company estimates it could save *\$1.5 million per month* if unplanned (emergency) transfers could be prevented by early detection and treatment.
- Disposable wireless sensors can also help decrease hospital-acquired infections. The industry estimates that disposable sensors could help to *save an estimated \$2,000 to \$12,000 per patient* — more than \$11 billion nationwide.
- Remote monitoring of patients with congestive heart failure alone would create an annual savings of *over \$10 billion a year*.<sup>2</sup>

#### V. Spurring Innovation in Mobile Health

- The larger mobile health industry consists of mobile applications, cloud-based data management, wireless medical devices, and many more innovative solutions to increase patient engagement and improve the delivery of health care services.
- Almost 17 million people are accessing health data on their mobile phones in the United States, a 125 percent increase since 2010.
- mHealth is expected to be *a \$2 to 6 billion industry* by 2015.<sup>3</sup>
  - About 88% of doctors support patients monitoring their health at home, especially weight, blood sugar, and vital signs.<sup>4</sup>
- Early detection allows earlier treatment and, therefore, better outcomes. For example, after an initial hospitalization for heart failure, 60% of patients are readmitted at least once within six to nine months. Industry estimates indicate that remote monitoring could *generate net savings of \$197 billion* over 25 years from just four chronic conditions.<sup>5</sup>

#### VI. How Medical Body Area Technology Works

- MBAN technology consists of small, low-powered sensors on the body that capture clinical information, such as temperature and respiratory function. These sensors free patients from the set of wires that would otherwise anchor them to their hospital bed. As patients recover, the technology allows them to move about the health care facility, while still being monitored for any health issues that might develop.
- MBANs consist of two paired devices—one that is worn on the body (sensor) and another that is located either on the body or in close proximity to it (hub).
- This new spectrum allocation could:
  - Provide more reliable service and increased capacity for the use of MBANs in hospital waiting rooms, elevator lobbies, preparatory areas, and other high-density settings.
  - Dramatically improve the quality of patient care with more effective monitoring, catching patients before critical stages, improving patient outcomes, and ultimately saving lives.
  - Decrease expenses while increasing competition and innovation, easing entry for companies that are developing new wireless medical devices.

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<sup>2</sup> [West Wireless Health Institute](#)

<sup>3</sup> [Healthcare Information and Management Systems Society](#)

<sup>4</sup> [Float Mobile Learning](#)

<sup>5</sup> Robert E. Litan and the Kaufman Foundation, “Vital Signs via Broadband: Remote Health Monitoring Transmits Savings, Enhances Lives,” 2008.