



Healthy Wireless Waves

Growth in wireless medical devices is an unstoppable trend. It supports changing demographics, makes technological sense and is an economic imperative. The government is also setting waves in motion for wireless medical devices to be an essential technology for healthcare delivery. We examine how governmental regulatory bodies can leverage proven communications technologies and wireless connectivity to meet these growing challenges.

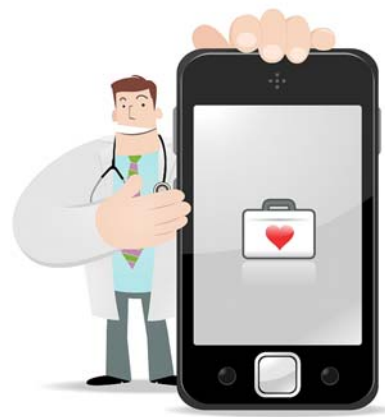
The FCC and FDA convened a joint meeting in Washington, D.C. For the regulating agencies, the purpose was multi-faceted:

- 1) A growing recognition that within their spheres of operation, medical technology with wireless connectivity is becoming ubiquitous.
- 2) A better understanding of how various stakeholders (medical device businesses, physicians, caregivers and patient advocates) view this trend and the regulatory bodies' role in it.
- 3) Public visibility (in the most political of venues) of their interest and willingness to listen to constituents.

The government bodies succeeded on all fronts. Attendees generally believed that the promise of forthcoming guidelines will work to support and accelerate this strategic development.

To start with, the wireless medical technology trend makes sound demographic sense. The

US and all western countries have large aging populations that will need more health care as they grow older. The next generation to enter retirement years is technology-savvy, having grown with computers, the internet and mobile phones. This generation will live longer than previous generations as life expectancy continues to increase. As is human nature, they will seek independent living for as long as possible. These people will be very motivated to take advantage of medical technology that provides self-monitoring or promptly alerts care-givers and family if there is a need for medical assistance.



Secondly, wireless technology for connectivity to medical devices has reached a new level of maturity and ubiquity. The population is armed with smartphones that are really portable computers with wireless connectivity. Medical device industry forums have recognized these devices' potential as a gateway device for the transfer of data from medical sensors, the display of pertinent information to the user, and the relay of relevant data to the outside world.

Recognizing that one size does not fit all, many wireless medical applications need primary protected spectrum and are too critical to share the airwaves with smartphone voice and data traffic. This is particularly important in hospitals for acute care applications. At the FDA and FCC meeting this point was raised. However, most medical applications can leverage today's commodity wireless technology.

Finally, there is an economic imperative that wireless medical technology grows. The supply and demand issues are real -- fewer hospital beds and health care providers per capita, projections that managed entitlement programs and government finances are going bankrupt, just as demographic shifts increase demand for services. The looming shortages of skilled personnel to provide health care and lack of funds to pay for it point to a bleak and unsustainable outcome.

Could home-based medical care that is well monitored help this crisis? It not only could, it must.

The government through its agencies has a responsibility to ensure that the medical technology we buy is safe. It also has a responsibility to the people to approve technology that can improve their quality of life.

Medical data is also a sensitive subject. Some information is highly confidential, some needs to be accurate and complete to be useful, some needs to be acted on in real-time, and some not. Meeting these requirements is challenging. However, many of these data requirements are not unique to the medical industry: financial data is confidential and time sensitive, wireless military information has its own stringent security and integrity requirements. There is a wealth of experience from other industries that can be leveraged as the FDA and FCC produce their guidelines for medical wireless products.

As you consider these questions and mull over your wireless medical device engineering challenges, take action and call Egret Technologies. Our work with our clients is about "Turning Innovation into Profit" and we look forward to hearing from you.

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