IBM Study Identifies New Generation of Connected Health Devices

IBM

Armonk, NY, USA - 27 Jun 2011: Consumers have a growing appetite for health and wellness devices, and this represents a burgeoning market opportunity for device manufacturers that has barely been tapped, according to a study from IBM (NYSE: IBM). The company also unveiled a list of possible wellness device innovations of the future, which have the potential to change how people live, exercise and interact with their healthcare provider over the next five years.

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Increasingly, wellness devices will be used to fill the information gap for consumers that are relatively healthy, but need devices that provide information to help them gain greater control over their conditions and lead healthier lives. These devices will plan, predict and monitor information, feeding it directly to caregivers and clinicians as well as support networks. Users will interact with devices on their own terms, and connect them via broadband, wireless and wireline connections.

Time for a Check-up?

Conducted by the IBM Institute for Business Value, the study indicates that the growing demand for devices is driven by "information seekers" -- people who will increasingly turn to technology to help manage health-related challenges to reach their wellness goals.

The study surveyed more than 1,300 consumers currently using health and wellness devices and found that these consumers are demanding a new generation of health devices, greater simplicity and better information sharing. Users want the ability to connect with their caregiver and reduce office visits to their healthcare professionals and the added ability to collaborate online with a community of peers with similar issues and interests.

And they are willing to pay for it. More than one third of current device users surveyed expect to contribute to the cost of new health devices over the next two years while 35 percent also expect to pay a monthly service fee.

"People want to take a more active role in managing their healthcare – both to reduce costs and improve their quality of life," said Katherine Holland, general manager, IBM Life Sciences. "Device makers have a great opportunity to fulfill this need – but to be successful, they must partner to ensure they have the blend of skills, consumer understanding and healthcare expertise."

Top Devices of the Future

Whether connected online, to a PC, gaming device, tablet or smart phone, wellness devices will become ubiquitous in the future, especially in caring for the sick, the elderly and those in need of medical assistance, but also for healthier people who want to achieve wellness goals. IBM scientists and healthcare experts envision a number of new devices to help individuals with the following challenges:

Dieting – A new generation of devices for dieting will also measure movement, speed and intensity. These devices will engage users if they aren't moving enough or provide a movement task to accomplish. Relying on the help of friends, family and social networks, the devices could alert others to elicit motivation, encouragement or even to "tell on them" to hold them accountable to a friend. These devices will be integrated into tools for monitoring medication adherence, blood pressure and weight for a more complete picture of the user's health.

Elder Care – In the U. S., an estimated 5.4 million people have Alzheimer's disease. In the United Kingdom, two-thirds of people with dementia live outside of a care facility. For patients suffering from memory loss or impairment, devices for establishing location and compliance with medication regimes, connected to a digital pill box will be commonly used. These devices will pinpoint the location of both the user as well as the caregiver, to give the patient peace of mind, providing medication reminders and direct access to caregiver support.

Blood monitoring – The advent of a non-invasive blood test to automatically analyze blood via a wrist band will wirelessly transmit data to your doctor. When cholesterol levels spike, iron levels drop or white blood cell counts increase, users will know when to modify their medications, or seek medical attention.

Independence and mobility – Mobility is a critical factor to independent living, enabling people to remain in their homes and delay entry into assisted living and hospital facilities. Devices to keep people ambulatory will increasingly be used to monitor movement. These devices will provide coaching and tasks to improve coordination, range of motion and stability. They will also determine if the user is walking steadily, getting out of chairs easily, or if he or she needs assistance. Devices and sensors that predict conditions that could lead to a fall can alert the user to stop and rest or ask for help. It will alert caregivers if a fall occurs.

Communication -- New devices that tap brain waves will make it easier for the medically fragile and impaired to express their thoughts and sensations via a digital avatar of the human body. With the help of sensors, even non-verbal patients will be able to express how they are responding to specific treatments or pain, precisely

indicate sensations in their body, or ask for medical attention, such as to change their position in bed or request more oxygen. These devices will capture important vital sign data as it streams in, interpreting it in real time and alerting caregivers to changes instantly.

According to the survey, users will expect devices to easily share information with their family or healthcare professionals. Additionally, they require:

- Ease of use – 96 percent said ease of use is the top factor in selecting one device over another.
- Reasonable pricing – Costs at or below $100 is a critical decision factor according to three quarters of users who consider price well ahead of features, customer support, warranty or stylish design.
- Real-time information sharing – 86 percent of consumers want real-time, easy-to-understand feedback from their devices.

It takes more than innovative devices

According to the study, device companies will need to strengthen their collaboration and partnering skills since it is unlikely any single firm has all the capabilities required to offer a total solution. These companies may need to collaborate with software companies that develop user interfaces, or publishing companies that supply health-related information and content.

Both consumer and clinician adoption of devices will hinge not only on ease-of-use, but also on industry-wide interoperability, the study concludes. Device makers should get involved and participate actively in future standards for the connected health device ecosystem. Additionally, manufacturers will need more than innovative, easy-to-use devices to succeed. A comprehensive consumer experience will be required. This must include online and retail support, accessories, additional information and content, social network support and education.

"As the healthcare market continues to grow, we envision a marketplace of products, devices and services that empower consumers to better care for themselves and to connect seamlessly with their healthcare providers," said Chuck Parker, executive director of Continua Health Alliance, an open industry organization of healthcare and technology companies focused on improving the quality of personal healthcare. "The collaboration of companies within the healthcare industry is essential in creating these new reliable, cost-effective personal health solutions."

About the Future of Connected Health Devices Study

The Future of Connected Health Devices was conducted by the IBM Institute for Business Value. It draws on the responses of more than 1,300 consumers most likely to be familiar with such devices. Eighty percent of those surveyed are living with chronic illnesses while the other 20 percent were caregivers. The survey was

conducted in both the United States and the United Kingdom.

For access to the full study report Future of Connected Health Devices, please visit: http://www-935.ibm.com/services/us/gbs/thoughtleadership/ibv-connected-health-devices.html [2]

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