

# mHealth and Home Monitoring

**mHealth and Home Monitoring** is the third consecutive report from Berg Insight that gives first-hand insights into the adoption of wireless solutions for health monitoring.

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## ***This report will allow you to:***

- **Identify** key players in the healthcare monitoring ecosystem.
- **Learn** about key home health monitoring devices and services.
- **Understand** the dynamics of the health monitoring market in Europe and North America.
- **Comprehend** how wireless technology can become seamlessly integrated with medical devices.
- **Evaluate** the business opportunities in the emerging mHealth segment.
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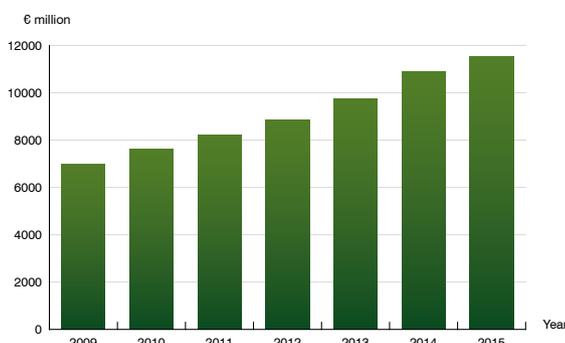
## Where are the business opportunities in mHealth?

eHealth is a term for healthcare practice supported by electronic processes and communication. More recently, mHealth has begun to appear as a term for eHealth using mobile phones or cellular networks. mHealth is a very broad term that principally involves every kind of mobile health related communication, application or data service. This report covers home health monitoring involving patient self-testing using medical devices and remote transmission of the medical data to healthcare providers for disease management.

Some of the most common conditions being monitored today are chronic diseases including cardiac arrhythmia, hypertension, ischemic diseases, sleep apnea, diabetes, hyperlipidemia, asthma and chronic obstructive pulmonary disease (COPD). These diseases are often but not always related to lifestyle. These conditions cause substantial costs and reduce both life expectancy and quality of life. The market for home health monitoring of welfare diseases was worth approximately € 7.6 billion in 2010 and is growing about 9 percent annually. The diabetes monitoring segment is by far the largest segment, worth about € 6.3 billion. The market includes revenues from monitoring equipment, disposable materials and services. Wireless technologies have only just begun to penetrate the market.

Berg Insight estimates that more than 200 million people in the EU and the US suffer from one or several diseases where home monitoring can become a treatment option. Additionally, there are those monitoring their personal health without a strict medical need and those monitoring their medication intake. At the end of 2010, an estimated 1 million patients used a home monitoring service based on equipment with integrated connectivity. The figure does not include patients that use monitoring devices connected to a PC or mobile phone; it only includes systems that rely on monitors with integrated connectivity or systems that use monitoring hubs with integrated cellular or fixed-line modems.

Several companies have developed integrated solutions for monitoring of multiple chronic diseases and other conditions. Examples include major technology and electronics companies including ►



Home health monitoring market revenue forecast, € million (Worldwide 2009–2015)

► Bosch, Honeywell and Philips, or small specialist telehealth companies such as Cardiocom, iMetrikus, MedApps and SHL Telemedicine. Many medical device companies are also active in sales of devices and services focusing on specific vital signs or medical conditions. mHealth has also attracted the interest of many of the leading players in the telecom and IT industries. Business opportunities exist in offering connectivity and data centre infrastructure and services for service providers and device manufacturers that provide home medical monitoring services directly to patients or caregivers.

Moreover, a growing number of application developers have released health and wellness apps for smartphones. Common app types include BMI and calorie calculators, diet guides, exercise guides and sport tracking apps. There are also many medical reference and chronic disease management apps available. In the future, smartphones are likely to be the primary monitoring device for many patients. More and more vital sign meters can be connected to handsets or PCs using for instance Bluetooth.

The adoption of out-of-hospital wireless monitoring in healthcare is driven by a wide range of incentives, related to everything from demographics and technology development to new advancements in medical treatment. However, there are also challenges such as the financing of wireless solutions by what is at large an underfunded healthcare sector. In order to receive reimbursement, suppliers of medical products not only have to prove their worth in a clinical perspective, but also in an economical perspective. With rising healthcare costs, there is an increasing focus on early diagnosis and home treatment – potentially enabled by new technology. Several potential catalysts could speed up the adoption of cellular communication for healthcare monitoring purposes. These include increasing monitoring during clinical trials, insurance company requirements and growing popularity for non-prescribed medical monitoring.

### This report answers the following questions:

- Which medical conditions offer the best potential for wireless health monitoring solutions?
- Who are the leading providers of medical devices for home monitoring?
- Which are the general technology trends for home health monitoring equipment?
- What initiatives have been taken by the leading players in the telecom and IT industries?
- Why are smartphone applications so significant for the mHealth market?
- How will standardisation facilitate the integration of medical devices and mobile handsets?
- How can the mobile industry contribute to the adoption of wireless technology in healthcare?

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### Glossary

## About the Author



**André Malm** is a Senior Analyst with a Masters degree from Chalmers University of Technology. He joined Berg Insight in 2006 and his areas of expertise include wireless M2M markets and location-based services.

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