

Market Trends: Mobile Devices Create Healthcare Opportunities in EMEA

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Use of mobile devices to send and collect health data is transforming healthcare. This research discusses trends and the market ecosystem for mobility in healthcare in EMEA.

Key Findings

- Governments across EMEA are running multiple pilot programs to test the potential of incorporating mobility in care setting. Despite a trend toward use of mobile devices, confusion persists because of general hype concerning mobility.
- Home healthcare, led by patient health monitoring, offers maximum revenue potential for companies targeting this sector in next three to five years.
- Clinicians and consumers are increasingly using smartphones to access clinical systems information for communication and collaboration.
- Widespread and easy access to mobile phones has resulted in their being medium of choice to disseminate health information and collect health data.

Recommendations

- Devise region-specific strategies when positioning solutions. Developed health systems are predisposed toward home health monitoring. Developing healthcare systems are leveraging basic mobile phone as an information and support tool.
- Develop business cases that support equivalent level of care out of hospital along with reduction of costs. Engage clinical stakeholders early, help in training resources and lead by innovative risk-sharing models.
- Target systems where disease management is a priority to regulate costs. Insurer-driven systems in Germany and the Netherlands should be a priority. England, Scotland, the Nordics, France, Spain and Italy with a government mandate for home health and telemedicine should also be engaged.

- Look beyond traditional healthcare partners when exploring partnerships. Pharmaceutical and medical device companies are showing active interest in mobility.

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Introduction

Mobility is attracting significant attention among the healthcare and life sciences community. Integrating mobility has the potential to alter healthcare delivery and redefine the home care model. Medical inflation, rapid advancements in technology and consumerism in healthcare are prompting rethinking of the usual face-to-face, office-based patient-physician encounter.

Market Trends

Rising healthcare costs. Developed countries in Western Europe are grappling with changing demographics and proportional rise of elderly people. Increase in health spending is fast squeezing public spending and according to the Organisation for Economic Co-operation and Development (OECD), medical inflation is greater than general inflation.¹ Costs of treating chronic diseases continue to be the biggest challenge with more than 70% of entire healthcare spending, spent on chronic ailments. This is especially leading to prioritizing investments that will help reduce cost of treating chronic patients.

Technology helping monitor patients in out-of-hospital setting. Healthcare systems are experimenting with newer delivery-of-care models and are using technology to deliver outcome-driven healthcare instead of episodic care. Advances in technology can help monitor patients away from hospitals, which means that providers are actively "considering" their use in delivering improved or comparable level of care, thereby reducing costs. One obvious use is managing chronic diseases, such as diabetes, hypertension, chronic pulmonary diseases and cardiac conditions. A complex ecosystem is evolving with device manufacturers, telecom companies, service providers, health providers, and governments and regulatory agencies.

Governments encouraging home health and telemedicine initiatives. Many European governments are considering the use of home healthcare supported by mobile technology. Multiple projects (although mainly in pilots) are in place or are being analyzed, for example, Renewing Health and the Complete Ambient Assisted Living Experiment (CAALYX).^{2,4} Some governments have gone a step further and confirmed dedicated funding for such initiatives as France's Hospitalisation a Domicile project, which is a program dedicated to keeping patients at their homes (in 2010, the program had more than €600 in funding). The government of Denmark has already set reimbursement rates for physicians when they have an email consultation with patients and lately MedCom is actively involved in developing various e-visit and home health models.

Evolving use of mobile devices in collecting health data. Mobile phone access is widespread in Western Europe, with penetration greater than 130%. Telecoms face flat revenue growth, and in their quest to find newer avenues they realize that the bidirectional ability of mobile devices to interconnect data (and health data) can be a differentiator in the evolving healthcare world. More doctors are using tablets. After initial resistance by doctors, implementing electronic health records could spur the use of technology by making it easier to access medical records, check data on the move, and visualize and collaborate in real time.

Big pharmaceutical and medical device companies testing the market. Pharmaceutical companies face challenging times because of sharp falls in revenue due to expiration of brand patents, threat of generics and stringent regulatory compliance. The vertically integrated pharmaceutical value chain is under threat, and companies see opportunities in medication compliance, adaptive clinical trials, mobile apps and patient monitoring. Medical device companies are exploring opportunities to go wireless and "smart" at the same time.

The Market Is Evolving From Hype to Definitive Pilots

Mobility "has attracted attention from all market players. A range of offerings, from simple text-based reminders, nurse helpline services, online consultations, telemedicine, health monitoring, telecare, telehealth, diagnostic apps, and smart pills are being bundled under the health umbrella companies are identifying their niche position in this budding ecosystem and forming industry alliances and consortia to present a coherent face of the industry. Mobile devices are generally the first to be embraced by users for their utility to view or update the medical records, place an order or schedule an appointment. This saves time and makes for better collaboration among stakeholders. Various health systems are experimenting with how mobile devices could be leveraged for mobile working. For example, Project Nomad in England aims at understanding how mobile working can be used across local authorities with the National Health Service (NHS) mobile working knowledge center responsible for compiling benefits and best-practice guidance of mobile for NHS staff.

Although different vendors offer multiple mobile solutions, this report documents the following segments from the healthcare solution map (Healthcare Provider IT Solution Map, the Framework for IT Market Analysis, published 22 November 2011) where there is maximum market activity and value creation for healthcare delivery organizations and maximum revenue generation and partnership opportunity for the vendors:

- Home health
- Telemedicine
- Healthcare mobile apps
- Core care delivery
- Others, including texting, nurse triage call center and smart homes

Home Health

Home healthcare includes home health monitoring and telecare. Home health monitoring is the use of IT and telecommunications to monitor the health of patients in their homes and to help ensure that appropriate action is taken. Patients are given devices that measure vital signs (such as blood pressure, glucose level, pulse, blood oxygen level and weight) and that transmit the data to clinicians. The devices send data through wired or wireless connections to a "hub" or "gateway" system in the home, which transmits the data to an external server, where software can analyze the data and issue alerts to clinicians as needed. Most often, data from hubs is transmitted through a regular telephone line, although some hubs require broadband connections. The Veterans Health

Administration in the U.S. ran the largest telehealth trial, serving 50,000 veterans suffering from chronic diseases under the Care Coordination Home Telehealth program. Home health is seeing increasing interest from governments concerned with bringing down the healthcare costs and technology's capability to help providers monitor the care of the patients away from hospital. "Telecare" refers to applications that help maintain daily functioning and physical security of frail or elderly citizens (for example, applications that detect whether someone has fallen out of bed or forgotten to turn off the stove). Some leading examples:

- England's 3 Million Lives government campaign was launched in December 2011 following the Whole System Demonstrator (WSD) project and aims to benefit 3 million people suffering from long-term health and social care conditions through the use of telehealth and telecare services. In a recent development, the NHS in Somerset, England, is planning to monitor the health of 4,000 people using mobile health systems. The program will focus on cardiac conditions, diabetes and pulmonary conditions and provides patients with a touchscreen mobile to complete their vital details through a questionnaire format. The system then uses autotriage supported by staff analysis for conditions requiring further intervention. A similar program was adopted by the NHS in Bristol and South Birmingham.
- The Sophia Foundation in Germany offers telecare support for the elderly with telephonic support, telecare devices, intelligent wrist bands, video telephony, and so forth.
- Moulins-Yzeure Hospital, a 1,000-bed facility across two sites (Mills and Yzeure) in France, is working on an initiative for monitoring pulmonary diseases where the patient's blood oxygen levels are monitored along with the vital statistics. The project is aimed at reducing lengthy hospitalizations, improving monitoring and preventing conditions from getting worse. It also has videoconferencing capabilities.
- In Germany, public insurer Taunus BKK leveraged telehealth through a dedicated disease management program targeting diabetics. The project was led by insurers' desire to manage the disease and the costs involved.
- The Scottish center for Telehealth, now under NHS 24, has done work in telestroke, out of hours (OOH) services and Health Presence (an accident and emergency video booth) for patients in rural areas with telestroke, pediatric and OOH now in commercial adoption.
- In the United Arab Emirates (UAE), telecom provider Etisalat is working with Ericsson to create mobile units that help physicians monitor their patients remotely.
- In Portugal, Olisipo's True-Kare provides phones, watches and key rings for the elderly alongside a Web self-care site to program medication reminders and appointments.
- In Finland, Vivago develops and markets systems for monitoring and analyzing user's activity levels.
- In the U.K., Cycell Easyphone is a special phone with preprogrammed numbers for the elderly.
- Just Checking helps people live independently in their own homes by monitoring movement and generating a chart of activity online.

Telemedicine

Telemedicine is the delivery of medical care at a distance using IT. Although interest is high, real progress is slow, with only some applications in mainstream adoption. Pilot programs are still in a transition to multiple implementations and wide clinical success stories. A few prominent examples of countries actively considering various telemedicine alternatives are as follows:

- Denmark is trialing telemedicine, with more than 2,000 patients participating in the country's telemedicine initiative. The program is focusing on such segments as pulmonary disease, diabetes and inflammatory bowel disease. The program is running in four hospitals and 10 municipalities. The government is spending 67 million Danish krone on the project.
- In France, government is focusing on telemedicine with its ASIP Santé initiative, which develops, coordinates and participates in the development of e-health in France. It is releasing a guide for the development of regional telemedicine initiatives. Eight pilot projects were chosen in France in 1Q12, which are funded by the grants from ASIP.
- In Spain, project Procur@ aims to develop a platform for neurodegenerative diseases such as Parkinson's and Alzheimer's and provide a comprehensive interdisciplinary care aided by telecare and telerehabilitation as one of its components.

The following categories have seen highest interest in telemedicine among governments and healthcare providers:

- E-visits — E-visits are asynchronous digital consultations enabled by Web-based application software that permit structured, secure messaging between a patient and a provider (typically, but not necessarily, a primary-care physician) for a well-defined and narrow range of consultations, such as for nonemergency questions, prescription refills and routine chronic disease management (for example, reporting of vital signs). Because they are often structured messages, e-visits are distinct from email.
 - In Spain, GMV's Antari offers a set of modular tools and solutions that can be integrated with any electronic health record system or medical devices for a real time e-Visit or a store and forward consultation session. The system supports appended Picture Archiving & Communications System (PACS) images even over Kbps connectivity, which is useful in remote regions or developing Africa.
 - In the U.K., 3G Doctor allows patients to have a video consultation with a General Medical Council accredited doctor through a compatible mobile phone. 3G doctor aims to complement traditional family doctors instead of replacing them.
 - In Turkey, telecom company Avea, a mobile phone operator, along with Acibadem Health, a hospital group, offers a medical video call center service. The service called Avea AloDoktorum offers general health information and advice through the call center staffed by trained resources including medical doctors.
 - Hospital Clinic in Barcelona is running virtual consultation system for HIV-infected patients where the doctors use a Web page and webcam to attend to patients. The system helped reduce the number of hospital visits.

- Remote electrocardiogram (ECG) monitoring — Remote ECG monitoring is the transmission of ECG readings from wearable devices to a service center typically operated by a third-party vendor. In some models, clinicians at the service center review the ECG readings and alert the patient if they detect an abnormality. In other models, the service center uses software to detect abnormalities and issue alerts (for example, by sending SMS messages).
 - Broomwell Healthwatch in the U.K. provides for ECG recording to be transmitted from a patient's home on to a central monitoring station staffed by trained resources.
 - Medical device manufacturer Sorin Group, in collaboration with telco Orange, has launched SmartView, a remote monitoring solution for patients with an implanted cardiac device. The device aims to significantly reduce the time for detecting cardiac exacerbation.
 - Biotronik's implantable cardioverter defibrillator can send ECG data through a cardio messenger gateway, when it detects an abnormality. The cardio messenger transfer data through GPRS over Deutsche Telecom's network and feeds data to the patient's electronic medical records managed by Biotronik.
- Teledermatology — There are two primary models of teledermatology (remote diagnosis of skin conditions): store-and-forward (asynchronous) and video (synchronous). A hybrid model of teledermatology is also in use. This involves sending high-resolution images to the dermatologist prior to the video consultation with the patient.
 - NHS Bristol in England has more than 50 general practitioner practices linked in for leveraging teledermatology service. The service has a response time of three days, and apart from helping diagnosis patients, the service also helps in continuous learning for the doctors. Teledermatology uptake is expected to rise significantly, and a recent study shows that remote viewing by skin care specialists significantly improves the diagnosis of dermatology diagnosis in a primary care setting.
- Telestroke — Telestroke is the use of video assessments in the delivery of stroke care. Telestroke enables hospitals to get their patients assessed on short notice by a remotely located neurologist using a video cart or a rounding robot. The neurologist is typically employed by an academic medical center or a third-party vendor.
 - Thrombolytic treatment given to patients within 4.5 hours of onset of stroke can save lives. Because time is critical, telestroke is helping improve the speed of patient diagnosis at NHS North West Trust in Cumbria and Lancashire. Virgin Media telestroke network allows specialists to treat stroke patients remotely using high-definition technology and streaming video.
- Medication compliance management — Medication compliance management systems are designed to remind patients to take their medications, monitor that they have done so and send alerts to patients, clinicians or family members in the event of noncompliance. Among others, smart pills (ingestible sensors that can record various physiological measures) can also confirm that a patient has taken his prescribed medication.
 - In the U.K., Lloyd's Pharmacy will offer customers the smart pill from Proteus Digital Health that allows for medication compliance and monitoring of other body functions.

Healthcare Mobile Apps

These healthcare-specific applications run natively on smartphones, media tablets and other mobile devices. The applications could be for a variety of functions, such as assisting primary care clinicians in identifying what screening/counseling/preventive services are appropriate for their patients, medical education or retrieval of medical literature/information on demand, drug-drug interaction information, medical calculators, drug-dose calculators, monitoring patient's radiology images on mobile devices, and so on. Included in this category are clinician applications that are used as an accessory to medical devices, or clinician applications that virtually transform a mobile handheld device into a medical device by using specific attachments or sensors (for example, applications that turn a mobile device into a breathalyzer, glucometers, ECG).

- iDoctus in Spain provides access to proven and reliable reference information about medications, drug-drug interactions, diseases, calculation tools, update in different areas of medical knowledge, etc., and helps improve efficiency of clinical practice and patient safety.
- Sanofi Aventis' (a pharmaceutical company) iBGStar Blood Glucose Meter connects with the mobile device and allows the ability to record, track and manage diabetes.
- In Egypt, project Es3efny provides communication between the ambulance and the hospital. The doctors can have real-time access to the patient's vital data, such as ECG, Pulse Oximeter, blood pressure and temperature. It can also guide medics on how to deal with incoming patients during the "golden hour" (the period immediately following trauma to the patient, when the likelihood of preventing patient casualty is maximum).
- Egypt's Mobile Baby initiative is a joint program between Orascom and Mobinil that allows wireless transfer of a patient's ultrasonography images onto the doctor's mobile phones for analysis.

Core Care Delivery

The solutions in this category facilitate the doctor-patient encounter: This solution area includes technologies that allow care delivery organizations to arrange, deliver and manage patient care. Solutions in this group are typically aimed directly at the physician, support staff, nurses and patients. Facilitating care of patients across the entire spectrum of care delivery is the primary criterion for inclusion in this category. An interesting example of incorporating mobility is to build custom access for the EHR solutions through a mobile device. Many EHR companies are building interfaces for users to be able to access the solutions through mobile phones, tablets, and so forth.

- In Portsmouth, U.K., the use of smartphone-enabled digital pen and paper by midwives is generating substantial interest. Along with the advantages offered by the positional navigation, this initiative also saved time used for administration and yielded multimillion-pound benefit for the NHS.
- Intel-GE's Mobile Clinical Assistant offers a rugged hardware device for the caregivers to capture the patients' documentation notes at the bedside.

Others

This category includes texting, nurse triage call center, smart homes, and so forth. There is increasing interest among healthcare providers in using texting for patient communication, for example, to notify patients about pending appointments, office or ER waiting times, notifications, and medication compliance reminders. Texting also allows patients to reply to confirm or change appointments. Smart homes for the elderly provide safety alarms, environmental and energy control, communications and integrated real-time location systems for safer independent living in their homes.

- In Norway, the Besta project explored smart home technology for individuals suffering from dementia with the aim of increased safety for residents.
- The Smart Home for Elderly People project in Europe is an integrated, smart platform for elderly with Alzheimer's disease to use technology for independent living.

Market Structure Trend

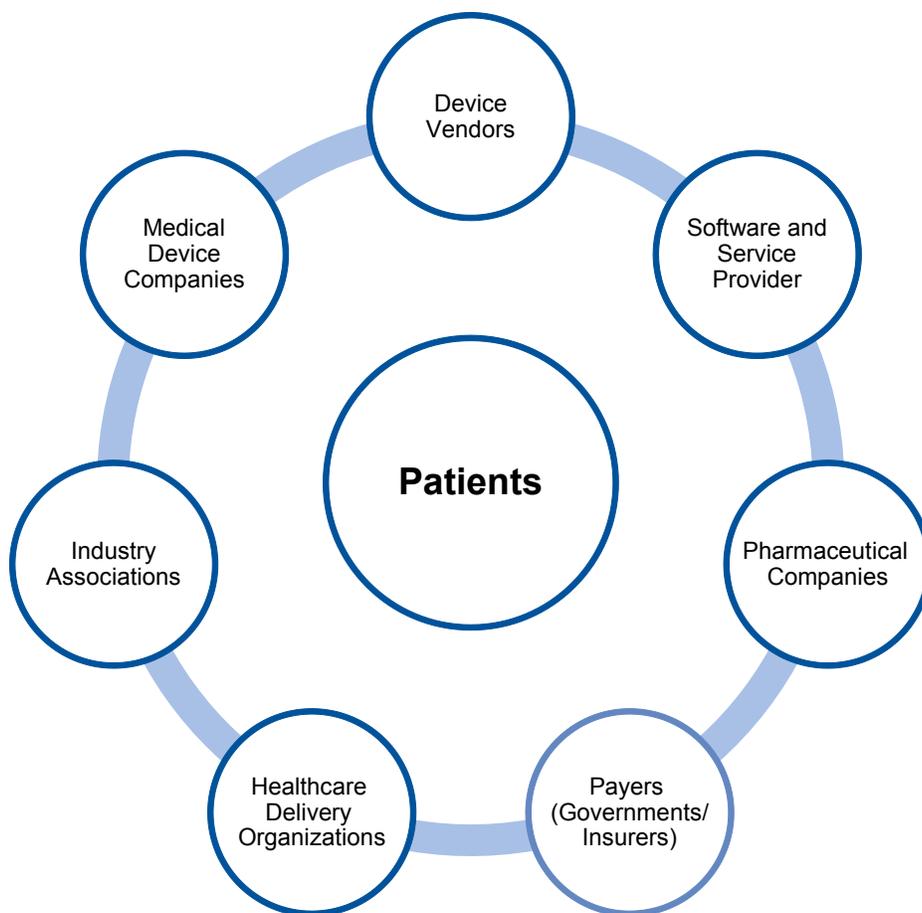
Telcos Jostle for Dominance Along With Equipment Vendors

The market is evolving, and the following are main stakeholders (see Figure 1):

- Device vendors — This category includes companies that develop the device or hub that collects the data from the peripheral equipments. Companies position a separate hub with some wireless connectivity to collect the data from peripheral equipment, such as glucometers and oximeters. But many companies now offer the choice of replacing the physical hub with a tablet as a medium of choice.
- Software and service provider — This provides the software that makes the whole architecture work. The software providers generally provide the software (along with application development and maintenance), infrastructure (including the connectivity) central portal (which triggers the first level of automatic support/alerts) and other analytics on top of the portal. There is also a service component to complement the software. The majority of IT software and service companies and telcos are strong in this segment.
- Pharmaceutical companies — These companies face challenging times with patent expirations, threat of generics and stringent regulatory compliance, among others. Companies see opportunities in medication compliance, adaptive clinical trials, mobile apps and patient monitoring, among others.
- Payers, including the governments or insurers — Most European health systems are government-led. Germany, the Netherlands and Switzerland are the major insurer-led systems in Europe. Most developing countries are led by private, out-of-pocket spending.
- Healthcare delivery organizations — These include the hospitals and facilities that administer care.
- Industry associations — These are the industry bodies/alliances of the companies.

- Medical device vendors — These companies manufacture and market various medical devices.

Figure 1. Major Stakeholders



Source: Gartner (August 2012)

Following are the important associations associated with mobility in healthcare:

- Telecare Services Association
- European Connected Health Alliance
- International Society for Telemedicine and eHealth
- Continua Health Alliance
- Integrating the Health Enterprise
- GSMA (GSMA represents the interests of mobile operators worldwide.)
- United Nations m-health alliance

The main challenges for adopting mobility in healthcare are:

- Reimbursements and legal barriers: The major hindrance for adoption of mobility is financial reimbursement. If various government agencies and payers do not recognize telemedicine, home health or other initiatives for provider reimbursements, then the whole issue will never reach its real market potential.
- Government policy and road map: A clear directive from the government will spur adoption of mobility in healthcare. EHR adoption in the U.S. received a big boost after getting stimulus money from the government. We need to see more centers of expertise being set up by the government. For example: Scotland's success is partly driven by these centers of expertise that are accessible by the various NHS boards.
- Clinical buy-in: Healthcare delivery organizations need clear proof of the long-term benefits of adopting mobility, especially telehealth and telemedicine programs. Clear benefit studies from key players in the m-health ecosystem are vital to driving acceptance in the medical profession. Absence of major acceptance from the doctors can kill this initiative.
- Regulators such as the National Institute of Clinical Excellence in England need to come out in favor of adopting mobility and help spur the adoption of mobility. A clear adoption drive will help in a major way. Quality Outcome Framework reimbursements have been an important factor responsible for a high use of IT by general practitioners in the U.K., and a similar stance can spur adoption of mobility.
- Cost: The cost of implementing technology should be made affordable for providers. Because healthcare providers themselves are implementing newer initiatives, the cost of devices and whole services (including training) could be an initial challenge. Innovative business models by companies, for example on a pay-per-use basis, volume discounts and joint risk sharing will be needed.

Buyers Trend

Buyers Are Changing Buying Centers; BYOD Making Inroads, Strengthening Mobile Strategy

In many countries, the decision making is now actively involving the clinical stakeholders. The Department of Health in England actively supports the creation of a chief clinical information officer. As the clinical stakeholders take on a more active role, companies positioning solutions need to actively engage them early in the sales process by demonstrating the clinical benefits achieved, ease of use and the possible savings (time and investments). Physicians and nurses are important segments to target for influencing adoption of mobility across the healthcare enterprise. The ability to access medical information on the spot and leverage peer-to-peer collaboration are strong value drivers for adopting mobility.

Mobile devices, especially tablets, are appearing in larger numbers across hospitals as a device of choice for doctors. Providers are also transitioning toward a user's preferred bring your own device (BYOD) mobile strategy. IT departments are under increasing pressure to allow personally owned devices to connect to the network and applications within the organization. Handheld mobile

devices can serve many purposes — for example, results viewing, ordering, e-prescribing, charge capture, vital-sign entry, dictation, reference data access, remote monitoring and Internet access.

According to the most recent Gartner CIO survey, mobile technologies were cited as the second-most important priority in 2012 (see Figure 2).⁵ The cross-industry CIO survey indicates that of the surveyed CIOs, 61% were planning on improving the mobility capability. The spending on mobility is seen as the frontier for technology, with about 35% of the CIOs planning to be market leaders in 2015, up from about 8% in 2011.

Figure 2. Healthcare Provider CIO Technology Priorities

CIO Technology Priorities	
Please indicate your top three priorities for 2012-2015	
Analytics and BI	1
Mobile technologies	2
Virtualization desktop, server and storage	3
Cloud computing (SaaS, PaaS, IaaS)	4
IT management technologies (program, project mgmt., governance, change mgmt.)	5
Legacy application modernization, upgrade or replacement	6
Infrastructure and data center management technologies	7
Collaboration technologies (e.g., workflow mgmt., team collaboration)	8
Security technologies (access control, authentication, etc.)	9
CRM applications	10

Source: Gartner (August 2012)

Regional Trend

Europe Largest in Absolute Numbers, but Middle East and Africa Growing Rapidly

Developed health systems in Europe and some regions in the Middle East will leverage mobility mainly through home health monitoring. Most developing countries in the Middle East and Africa will leverage mobility through use of mobile phone devices for collecting and sending health data, along with helping equip healthcare professionals with additional information resources.

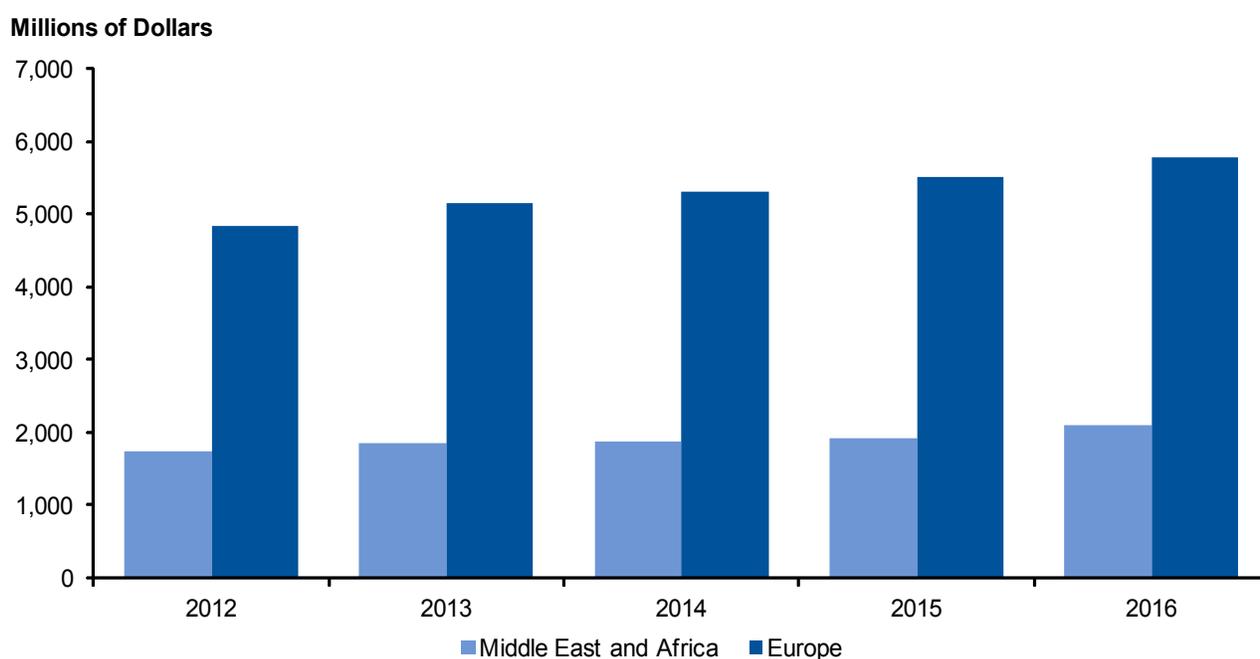
A nonprofit based in Ghana, mPedigree, advocates development of strategies to fight drug counterfeiting, which is a problem in many developing countries. Similarly, FrontlineSMS in Africa leverages mobile phones to help allow healthcare workers in the field to gather data effectively.

Qatar, UAE and Egypt are at the forefront of adopting mobility in healthcare in the Middle East. Qtel helps the diabetics in Qatar and neighboring countries receive alerts and information about their

health. Etisalat helps provider users in the UAE get general health information through the Value SMS platform and medical advice from consultants on general medical issues.

Figure 3 indicates only the size of the mobile device and mobile services category in Europe (Western Europe and Eastern Europe) and the Middle East and Africa. Mobile devices include basic phones, enhanced phones, entry-level smartphones and feature smartphones. Mobile network services are expenses incurred from mobile telephone calls and mobile data usage like Short Message Service (SMS) and mobile data access. Enterprise spending from mobile telephone calling charges, mobile data access, SMS charges, line rental/subscription and connection fees is included in this category.

Figure 3. Market Size for Healthcare Mobile Devices and Services



Source: Gartner (August 2012)

Contrarian View

Absence of Coherent Regulatory Policy and Clinical Community Support Would Be a Setback

For all the benefits of adopting mobility in healthcare, if the reimbursement levers are against the outcome-driven healthcare (and instead directed toward the number of episodes of face-to-face care), then the assumptions assumed in this research will be invalid.

Governments are embracing mobility as a new "disruptive innovation" in healthcare that will revolutionize the way healthcare is administered, but the absence of any major policy from the

government will be a setback for mobility. Clinicians can make or break any major change in healthcare, and if they are not incentivized to adopt mobility initiatives, then this will never take off.

Vendors to Watch

Vendors Offering Multiple Products, Services

The following vendors offer multiple products and services:

- Honeywell (<http://www.hommed.co.uk/>) — Honeywell HomMed supports the implementation of telehealth programs with a variety of healthcare customers, including hospitals trusts, retirement villages, doctor surgeries, managed care organizations and strategic partnerships around the U.K. and internationally.
- Tunstall Healthcare (<http://www.tunstall.com>) — Provides patients with the means to easily monitor their vital signs and symptoms at home.
- Bosch Healthcare (<http://www.bosch-telehealth.co.uk>) — Bosch Telehealth supports healthcare professionals at clinician and patient interfaces, as well as funding bodies, in providing enhanced and regular care services for patients with chronic conditions.
- GMV (<http://www.gmv.com/en/Healthcare>) — Develops technological solutions to achieve a more efficient healthcare system with the goal of facilitating access to healthcare services.
- Care Innovations (<http://www.careinnovations.com>) — Intel-GE Care Innovations provides technology-based solutions that give people confidence to live independently, wherever they are.
- H and S (www.hes.it) — Provides a telehealth hub that enables a bidirectional flow of information between patients, caregiver and medical staff.
- Philips (<http://www.healthcare.philips.com>) — With Philips Telehealth Solutions, clinicians can remotely monitor patients' vital signs data and send them short surveys about their health status.
- Safe Patient Systems (<http://www.safepatientssystem.com>) — Innovative telehealth, telemedicine, m-health and medical care solutions developed by clinicians, for maximum clinical efficiency and patient safety.
- Cisco (<http://www.cisco.com/web/strategy/healthcare/>) — Cisco Care-at-a-Distance and Clinical Workflow Solutions help local and remote healthcare teams improve collaboration, streamline workflows, enhance patient examinations and consultations and make critical decisions.
- O2 Health (www.o2health.co.uk) — Part of Telefonica, Spain. O2 Health can set up appointment reminders, prescription and medication notifications, test results and health promotion information.

- Orange (www.business.orange.co.uk) — Orange Health Gateway is powered by iPlato and provides a secure, Web-based platform for SMS communications.
- BT Health (<http://www.btplc.com/health/>) — Provides IT and communications services to the National Health Service in the U.K.
- Deutsche Telekom (<http://www.telekom.com/innovation/80572>) — Provides ICT solutions to give digital support to all administrative and medical processes.

The following vendors provide specific services:

- Virgin Media Business (<http://www.virginmediabusiness.co.uk>) — Provides an OOH Telestroke service, ensuring that a 24/7 stroke service is deliverable apart from other solutions.
- Imprivata (www.imprivata.com) — Provides secure text messaging solution for hospitals that runs as a native application on the iPhone and Android, as well as a browser-based client.
- iPlato (www.iplato.net) — Provides a mobile platform to enhance patient services across prevention, treatment and disease management. The flagship product, Caresupport, supports condition management and patient behavioral change programs.
- Avea (<http://www.avea.com.tr>) — Members of HelloDoctor can make voice or video calls to a doctor and get consultancy services about health and guidance in emergency cases.
- Etisalat (<http://www.etisalat.ae>) — Etisalat's Mobile Baby program delivers affordable primary healthcare solutions to remote, rural regions of Africa. Qtel (<http://www.qtel.qa>); provides health information about diet, obesity, diabetes and personal health via mobile phones; offers consultation via private m-health accounts.
- 3GDoctor (<http://www.3gdoctor.com>) — Allows video consultation with General Medical Council registered doctors using a 3G video mobile device.
- Broomwell Healthwatch (<http://www.broomwellhealthwatch.com>) — Broomwell Healthwatch monitoring center had interpreted more than 30,000 ECGs. It serves a large number of medical practices, medical centers and hospitals in various parts of the country.
- Proteus Healthlink (<http://proteusdigitalhealth.com/>) — Provides wearable and ingestible sensor technologies to detect medication intake and physiologic data.
- SHL telemedicine (<http://www.shl-telemedizin.de/>) — A German telemedicine service provider.
- Vivago (<http://www.vivago.com/>) — Builds and markets personal security systems that monitor and analyze user's activity levels.
- True-Kare (<https://www.true-kare.com/en/service>) — True-Kare devices help manage daily life activities for the elderly or disabled.
- Just Checking (<http://www.justchecking.co.uk/>) — Helps people to live independently in their own homes by monitoring their movement in their homes and generating a chart of activity online.

- Sanofi Aventis (<http://www.bgstar.com/web/ibgstar>) — Blood glucose meter that connects to a supported mobile phone for managing diabetes.
- Johnson and Johnson (www.jnj.com) — Expanding health information for mothers over mobile phones.
- Sorin group (www.sorin.com) — Provides remote monitoring that combines intelligent cardiac device features to improve cardiac patients' care.
- Sonitor (www.sonitor.com) — Ultrasound-based real-time location system automatically tracks patients effectively in care settings.
- Stanley Healthcare (www.stanleyhealthcare.com) — Wi-Fi-based real-time location system in the healthcare market.
- CenTrak (www.centrak.com) — CenTrak offers a hybrid real-time location system technology to deliver certainty-based location data.

Conclusions

Mobility is set to revolutionize healthcare delivery. In the short term, the BYOD and tablet revolution among caregivers presents opportunities for porting core clinical delivery on mobile devices. Using mobile phones for text services presents immediate opportunity to engage health delivery organizations. In the long term, home health and remote patient monitoring will be the largest revenue opportunity. Partnerships will derive business with telcos, pharmaceutical companies and medical device manufacturers assuming larger roles.

Recommended Reading

Some documents may not be available as part of your current Gartner subscription.

"Market Trends: Successful Marketing in an Uncertain National Health Service Environment"

"Market Trends: Healthcare Provider IT Solution Map, the Framework for IT Market Analysis"

"As the Mobility Movement Gains Momentum, Healthcare Delivery Organizations Must Prepare to Adapt"

"Market Trends: Go-to-Market Issues for Technology and Service Providers to U.K. Central Government, 2011"

"Hype Cycle for Telemedicine, 2012"

"Clinical IT Terms: Globally Aligning the Use of EHR, HIE, PHR and Others"

"Magic Quadrant for Global Enterprise EHR Systems"

Evidence

Gartner used a combination of primary research with healthcare agencies and government technology vendors, as well as secondary research covering major government legislation, industry research and academic publications, to create a map of major business and technology trends in the EMEA healthcare market.

¹ According to the World Bank, healthcare spending as a percentage of GDP has risen from 9.7% in 2005 to 10.4% in 2010.

² CAALYX: Focused on improving the elderly's quality of life by prolonging the time they can stay safer, autonomous and independently at home.

³ WSD project was the world's largest randomized control trial for telehealth and telecare services involving more than 6,000 people. WSD's finding for telehealth highlights a 45% reduction in mortality rates and a 20% reduction in emergency admissions.

⁴ Renewing Health: Aimed at implementing large-scale real-life test beds for the validation and evaluation of innovative telemedicine.

⁵ Gartner's CIO 2012 survey of CIO technology priorities by industry had 2,336 CIO respondents, 92 of whom represented healthcare providers.

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