

eHealth, What is it and Why Should I Care?

Digital technologies allowing data and information to be shared, exchanged, viewed, and communicated have significantly impacted several business branches. Health care businesses also show definite trends and developments toward increasing the use of digital and internet information technologies. There are three major reasons why health care organizations would benefit by accelerating use of these developments. First, advances in healthcare (including both technological and healthcare information technology) allow better optimization of patients' data in medical decision-making. Second, health care providers can better engage, support, and guide patients to participate fully in their healthcare. Third, technology aids in facilitating care processes both administratively and logistically.



Countries all over the world have begun incorporating eHealth into their healthcare systems. Denmark, for example, has one of the best nation-wide eHealth systems in the world. Every citizen has a personal webpage where he/she can confidentially log-in and monitor their treatment and diagnoses, manage appointments and communicate with physicians, keep track of medication compliance, and order medication from pharmacies. In the U.S., patient portals of EHR systems allow two-way communication between physicians and patients on results of visits, testing, medication refills and general questions about conditions and diagnoses.

eHealth is a Term Used to Indicate Many Applications

- Distant/mobile monitoring of health conditions and feedback for self-management and monitoring by provider
- Electronic medical/health records, allowing patients access and multidisciplinary utilization by medical professionals
- Personal health records managed by patients themselves for recording daily observations, health experiences, and physical parameters
- Communication of information and safe exchange of data through messaging and video connections
- Multidisciplinary case discussions and case management between professionals, and between professionals and their patients
- Personalized information, education, and coaching for patients
- Technology-enabled distant medical operations for diagnosis, intervention, and rehabilitation
- Online communities and information sites about specific health conditions and topics
- Administrative and logistic support for disease management and care activities
- The development of large databases to foster new research, serving individual cases and medical decision making

Can eHealth Change the Way We Care for People?

Developments in new digital technologies will impact the very processes of care and relationships with patients within a very short time. The patient empowerment movement will have patients demanding the benefits they expect from these developments. Governing boards, and indeed governments themselves, struggle with the question of how to reduce costs of care while enhancing quality, satisfaction, and volume.

The core elements of eHealth make it possible to:

- Reduce superfluous visits to the providers without compromising the patient-physician relationship
- Easily monitor and instantly act on alerts by having quick access to the patient and the key players involved in the patient's care
- Guide patients through uncertainties, enhancing patient trust in the physician
- Have accurate data reliably at hand
- Adapt and personalize treatment plans according to the patient's needs and allow self-management by the patient, without losing insight of actual developments of the patient's condition
- Increase efficacy of care and its logistics directly with real-time administration



These different elements of eHealth give rise to participatory care – the balance between medical and patient perspectives. Key players are able to learn from each other's' viewpoints on health

care, without departing from medical protocols or standards. Self-management may allow for cost savings without compromising professional integrity or risking the quality of life. The core concepts create an optimal design of care paths and therapies within easy reach. Good clinical and medical practice go hand in hand with patient satisfaction and trust.

eHealth: A Promise for Efficacy, Satisfaction, Cost Savings

As technology becomes more advanced, more and more people have access to the knowledge of the world at their fingertips. Many people are already using health apps on their smartphones or the internet to help diagnose a personal or loved ones' condition. Doctors running telemonitoring trials all over the world are seeing a decrease in patient admissions, and an increase in medication compliance. Patients report to being more satisfied and have more trust with their caregivers. This is what healthcare is all about. Without a doubt, eHealth is a big part of the future of modern medicine.



Current Examples of eHealth

BAM Labs TLC sensor mat, when placed under the bed mattress, can be used to monitor heart and respiratory rates, as well as movements. The information collected is automatically sent to caregivers over a secure connection. This data can then be used by the healthcare providers to [determine sleep quality and sleep patterns](#).

- InTouch Health and iRobot have designed the RP-VITA® robot, among others, that make use of telemedicine technologies. The RP-VITA® has built-in navigation capabilities for self-mobility, can be easily controlled off-site, and transmits data in a secure and HIPAA compliant manner. A video demonstrating the [robotic technology in action for the acute care of strokes](#) can be seen here.
- The Medscape app is loaded with medical information and is a great reference for diseases and conditions, drugs, medical news, and more. It is a very [popular app amongst patients, medical students, and healthcare providers](#) alike.

- Stanford University’s Medicine X conference explores future technologies in the healthcare field. Vinod Khosla, businessman and venture capitalist, presented the [enormous potential for digital health technologies](#) currently and in the near future.
- Intermountain Health Center in Salt Lake City, Utah tested out a site that “enabled employees to undergo [e-consultations that allowed doctors and nurses to remain at their own workstations](#) by essentially passing the patient around from one area to another virtually (virtual waiting room, exam room, etc.)...the site, thus far, has been successful, and...Intermountain is looking to extend the service to its patients.”
- Domotica is a service that provides [distant home care and monitoring for elderly](#) patients living at home, following security and privacy regulations. A nurse demonstrates some of the features of the service that provide for distant control of electricity, water, opening/closing of doors, lights, gas, as an example.
- Glucose Buddy is an app available for patients with diabetes for self-monitoring. It has been featured by the American Diabetes Association’s Diabetes Forecast Magazine, NY Times, Wired Magazine, and others. Patients can log in things like blood glucose levels, blood pressure, medications, activities, A1C, and weight into the app. The data can be sent through the app to the healthcare provider.
- Orange Healthcare provides “Securized medical data hosting, enhanced patient journey in digital hospitals, chronic diseases remote monitoring, telemedicine and telehealth services, home care services for elderly people are some examples of Orange Healthcare services.” They are currently serving [60 million clients in 21 countries](#) throughout Africa and the Middle East.

eHealth Thought Lab

Based on client questions and needs, The Fox Group developed an interactive “eHealth Thought Lab,” involving three meetings to focus sequentially on (1) concepts, (2) development, and (3) implementation of your eHealth project. Participants from the client organization will work side by side with several experts from The Fox Group, exploring concepts and opportunities for eHealth applications.

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