

# Electronic Health Record Portals Definition and Usage



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## INTRODUCTION

E-health technology for health care consumers is the use of electronic resources, mainly web-based, on medical topics by healthy individuals or patients (Alpay, Henkemans, Otten, Rovekamp, & Dumay, 2010; Lee, Gray, & Lewis, 2010; Millard & Fintak, 2002). Our study focuses on a specific type of e-health technology, the electronic health records (EHR) Portals, which give patients access to medical records, exam results, and services, such as appointment scheduling, notification systems, and e-mail access to the doctor (Andreassen et al., 2007; Angst & Agarwal, 2009; Tavares & Oliveira, 2014b; Weingart, Rind, Tofias, & Sands, 2006). Understanding the acceptance and use of e-health technology by health care consumers is a very relevant topic with clear benefits for the society and future sustainability of the Health Care System (Or & Karsh, 2009; Wilson & Lankton, 2004). The warning signs are that the number of patients with chronic diseases is projected to grow by 45% between 2007 and 2025 and the workforce will be 10% smaller (Alpay et al., 2010; Tavares & Oliveira, 2014a). Combining these two trends, there will be less health professionals available in the future to support patients. EHR Portals may help patients carry out self-management activities making the use of the healthcare system more effective and sustainable, not only from the patient care standpoint but also from the financial perspective due to the increasing cost of the healthcare budget in the different countries (Alpay et al., 2010; Commission, 2004; McKee, Karanikolos, Belcher, & Stuckler, 2012; Metaxiotis, Ptochos, & Psarras, 2004; Tavares & Oliveira, 2014b).

The goal of this article is to provide a clear definition of EHR Portals, their advantages, current usage and provide insights of strategies to increase their use.

## BACKGROUND

To better understand, the definition of EHR Portals it's important to have a clear view of the technologies that support them. The first one are the Patient Portals, healthcare-related online applications that allow patients to interact and communicate with their healthcare providers (Weingart et al., 2006). EHR means a repository of patient data in digital form, stored and exchanged securely. It contains retrospective, concurrent, and prospective information and its primary purpose is to support continuing, efficient and quality integrated health care (Hayrinen, Saranto, & Nykanen, 2008). EHRs may include a range of data, such as, medical history, medication and allergies, immunization status, laboratory test results, radiology images, vital signs, personal statistics like age and weight, and billing information (Angst &

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Agarwal, 2009; Hayrinen et al., 2008). EHR Systems are the software platforms that physician offices and hospitals use to create, store, update, and maintain EHRs for patients (Angst & Agarwal, 2009). By definition an EHR Portal is a web based application that combines an EHR System and a Patient Portal, not only to enable patients to interact with their healthcare providers (schedule medical appointments, send messages to their physicians, request prescription refills online) but also to access their medical records and medical exams results (Angst & Agarwal, 2009; Tavares & Oliveira, 2014b; Weingart et al., 2006). Table 1 provides an overview of the definition, differences and communalities between EHR Portals and EHR Systems.

## **EHR PORTALS**

### **Current Implementation and Use**

A recent survey to United State healthcare providers showed that 57% of healthcare institutions already have a portal in place and 71% value the integration of the EHR System within the Patient Portal by choosing a product (patient portal interface) from their EHR vendor (Allphin, 2012). In Europe, not only healthcare providers, such as, hospitals and clinics, provide EHR Portals, but also governmental institutions provide these platforms to the patients (Alpay et al., 2010; Rodrigues, Lopes, & Tavares, 2013; Tavares & Oliveira, 2014b). This concept of national level Patient Portal, progressed into a trans-European initiative, the European Patients Smart Open Services (epSOS). EpSOS concentrates on developing a practical e-health framework and Information and Communication Technology (ICT) infrastructure that enables secure access to patient health information among different European healthcare systems (epSOS, 2014). The pilot stage of this project that ended in June 2014 focused in cross-border e-health services in the following areas: Patient Summary (access to important medical data for patient treatment) and Cross-border use of electronic prescriptions (epSOS, 2014).

In the United States of America (USA) a new guidance was issued by the Center for Medicare & Medicaid Services (CMS), called Stage 2 meaningful use (HealthIT.gov, 2014). This guidance requires that the eligible professionals and hospitals that participate Medicare and Medicaid EHR Incentive Programs must give their patients secure online access to their health information, including EHRs (Allphin, 2012; HealthIT.gov, 2014). Stage 2 meaningful use, boosted the development of new integrated EHR Portals

*Table 1. Definition, differences, and communalities between EHR Portals and EHR Systems*

|               | <b>EHR Portal</b>                                                                                                                                                                                                                                     | <b>EHR System</b>                                                                                                                                                                                                                           |
|---------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Definition    | Web based application that combines an EHR System with a Patient Portal that enables several functionalities such as: request prescription refills, schedule medical appointments, email messaging and disease management information areas.          | It is an IT platform for realizing the mechanisms of creating, using, storing, and retrieving an EHR. EHR Systems have to be based on an Architecture that enables them to be communicable, comprehensive, useful, and ethically compliant. |
| Differences   | <ul style="list-style-type: none"><li>• The aim of the EHR Portal is to give patient access to their clinical data and to enable the communication between the patients and the healthcare providers.</li><li>• Patient centered technology</li></ul> | <ul style="list-style-type: none"><li>• The EHR System focus is to provide access to clinical integrated information to the healthcare professionals.</li><li>• Healthcare professional centered technology.</li></ul>                      |
| Communalities | Both of the technologies use patients EHR. The main building block of an EHR Portal is the EHR System that with their interoperability capability may enable the EHR Portals to communicate.                                                          |                                                                                                                                                                                                                                             |

Bisbal & Berry, 2011; Blobel & Pharow, 2008; Weingart et al., 2006.

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