Establishing a Personal Electronic Health Record in the Rhine-Neckar Region

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Abstract. We present an approach to establish a personal and electronic health record (PEHR) system in our region, and describe the underlying vision, the technical aspects, the current status as well as the gained experiences. Applied are international standards (HL7, DICOM) and technologies existing today. Obstacles to overcome during the implementation have been the management of access rights, data privacy as well as the integration of the primary systems.

Keywords. personal and electronic health record, eHealth

In the past electronic health record (EHR) systems dominated the record-based eHealth projects [1]. In the recent years personal health records (PHR) became available and increasingly used [2]. Each system provides a set of particular advantages and disadvantages.

The core innovative aspect of our approach is that it intends to combine the best from both concepts in order to form a PEHR. Ownership and management of the record is given to the patients in order to empower them and in parallel also the information exchange between health care professionals is achieved via this patient-centric record. The solution will be implemented stepwise: first a physician moderated EHR was built (current state) which will in a second step be expanded by a PHR. Integration between the primary systems was achieved with international standards (HL7: ADT and MDM, DICOM: Store, QR) and existing technologies like a master patient index (MPI) based on IHE PDQ and PIX as well as a central patient repository. The record provides an integrated web-based view to all shared medical documents (currently medical reports).

During the first phase various aspects and problems had to be solved in areas such as management of access rights, data privacy, HL7-based integration of the primary systems, workflow and monitoring inside the primary systems. Our concept and experiences will be presented in detail.


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