As primarily general practitioners and certain specialists (e.g. Ophthalmologists and Neurologists) are treating diabetes patients, their referring practice information systems must be interconnected with the EMPower services. The systems used by general practitioners offer limited integration capabilities [6] due to proprietary interfaces. To address this an alternative, archetype-based approach was defined [7] and implemented in cooperation with an exemplary vendor.

In Turkey a nationwide EHR is available that serves aggregated data from treating health care institutions and which supports common interoperability standards (Figure 3).

To ensure interoperable data exchange within both pilots IHE [8] profiles like Patient Care Coordination Technical Framework are applied that are commonly used in regional and national EHR projects.

Self-monitoring data from the patients will be collected via the integrated Personal Health Record (PHR) of EMPower (Figure 4). It is considered that patients may use a PHR of an external provider and that they may use a PHA to monitor personal health status. Furthermore, it will be possible to import biomedical measurements directly from medical devices (e.g. blood glucose meters) or via PHAs that are already paired with the device. Technical interoperability will be based on the IHE profile XPHR.

Therefore the participants’ EMRs must be interfaced one by one.

References


7. GO IN  Integrationsmanagement- und Beteiligungs-GmbH Im Gesundheitswesen. Available from: http://www.goin.info


9. The research leading to these results has received funding from the European Community’s Seventh Framework Programme (288209, EMPOWER Project)

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Service Oriented Architecture (SOA)

The modular EMPower system follows a service-oriented architecture. Beside providing the primary EMPower functionalities as described in the introduction, additional services are required to ensure consistent data privacy and security, continuous auditing and logging mechanisms, seamless integration of heterogeneous data sources and end-user delivery of services to multiple platforms like smartphones, tablets and desktop computers.

The EMPower concept is presently implemented. A first prototype is available and pilot testing will start within this year.