What Is FHIR®?

The **HL7®** **FHIR®** (Fast Healthcare Interoperability Resources [1]) standard defines how healthcare information can be exchanged between different computer systems regardless of how it is stored in those systems. It allows healthcare information, including clinical and administrative data, to be available securely to those who have a need to access it, and to those who have the right to do so for the benefit of a patient receiving care. The standards development organization HL7® (Health Level Seven®[3]) uses a collaborative approach to develop and upgrade FHIR.

FHIR's development began in 2012 in response to market needs for faster, easier, and better methods to exchange the rapidly growing amount health data. This growth in the availability of new health data, along with the progressing "app" economy, created the need for clinicians and consumers to be able to share data in a lightweight, real-time fashion using modern internet technologies and standards.

FHIR is based on internet standards widely used by industries outside of healthcare. In particular, these include the **REST** approach, which describes how individual packets of information (termed **Resources**) can be shared easily. By adopting existing standards and technologies already familiar to software developers, FHIR significantly lowers the barriers of entry for new software developers to support healthcare needs.

Additionally, the FHIR standard provides the following advantages to software developers:

- A strong focus on fast and easy implementation; developers have reported they experienced simple interfaces being implementable in a single day.
- Free to use with no restrictions.
- Support from major vendors including Apple, Microsoft, Google, Epic, Cerner, and most other EHR vendors.
- Many free, online, and downloadable tools, including reference servers and implementation libraries.
- Many public examples available to help kick-start development of new applications.
- Interoperability out-of-the-box – base resources can be used as is, but can also be adapted for local requirements (the process of **Profiling**).
- An evolutionary development path from earlier HL7 healthcare standards, Version 2 and Clinical Document Architecture (CDA®), enabling them to co-exist and leverage each other.
- A strong foundation in web standards including XML, JSON, HTTP, and OAuth.
- Concise and easily-understood online specifications.
- A human-readable serialization format for ease of use by developers.
- A global community to assist implementers.

Since FHIR was originally launched, it has been used by healthcare application implementers across the globe, including the payer community, drawn by its ease of use. This has led to a large online community

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[1] http://www.hl7.org/fhir
[3] http://www.hl7.org

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supported by web-accessible specifications, community-developed tooling, servers, and libraries. FHIR is also utilized by other healthcare standards organizations such as IHE (Integrating the Healthcare Enterprise[4]).

While the information requirements of healthcare data are extremely complex, the HL7® FHIR® standard is a landmark step to remove many of the barriers to healthcare data exchange.

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[4] http://www.ihe.net