

what is health interoperability?



DEFINITION

Interoperability: "the ability of different information technology systems and software applications to communicate, exchange data, and use the information that has been exchanged". Also means "the ability of health information systems to work together within and across organizational boundaries in order to advance the effective delivery of healthcare for individual and communities" (source: HIMSS)

LEVELS OF HEALTH IT INTEROPERABILITY

- **Foundational:** Allows data exchange from one information technology system to be received by another
 - **Structural:** An intermediate level that defines the structure or format of data exchange
 - **Semantic:** Takes advantage of both the structuring of data exchange and the codification of the data including vocabulary so that the receiving information technology systems can interpret the data
- (source: HIMSS - Definition of Interoperability)



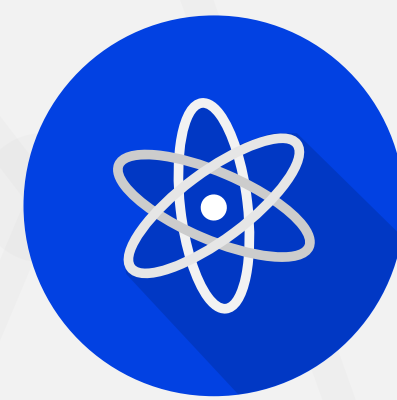
CROSS-BORDER INTEROPERABILITY

Cross-border interoperability aims to provide tools and common ways to exchange (health) information between countries.

According with epSOS, cross-border interoperability means interoperability between neighbouring and non-neighbouring epSOS Member States and their entire territories.

INTEROPERABILITY CHALLENGES

- **Legal and organisational:**
 - Implementation of legal common grounds for information exchange
 - Establishing of circles of trust
 - Legal recognition of involved parties, such as HCPs (including their roles), patients and others
 - Set in place common authentication mechanisms (e.g. European e-Identification projects)
- **Semantic:**
 - Represent as much as possible the information using clinical code-systems
 - Define common and agreed value sets for information exchange (e.g. health sets of terminologies)
 - Establish formal mappings of existent information to the agreed value sets
 - Include the translations to allow multi-language capabilities (for cross-country scenarios)
- **Technical:**
 - Implement common interfaces for services
 - Establish agreed format for information exchange
 - Prove and certify the compliance level of the involved systems
 - Define roadmaps for information integration



BENEFITS FOR HAVING INFO. SYSTEMS CONNECTED THROUGH CROSS-BORDER INTEROPERABILITY

For Citizens and Patients:

- Receive health care abroad (almost) seamlessly
- Receive medication in a foreign country on existing prescription
- Access to his own information in multiple languages and recognized formats

For Health Care Providers:

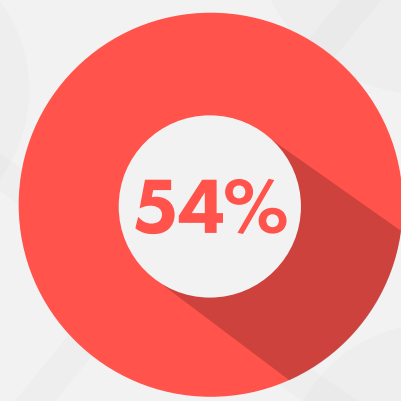
- Get quick and easy access to key patient data
- Improve health care cooperation across borders

For Health Care Quality:

- Reduce medication errors by exchanging data
- Facilitate the occasional care of foreign patients

ANSWERS TO THESE ISSUES

- **IHE:** Integrating the Healthcare Enterprise
- **HL7:** Health Level Seven International
- **DICOM:** Digital Imaging and Communications in Medicine



STATUS OF INTEROPERABILITY

54% European Hospitals (comprises German, Spain and United Kingdom) Have Systems Interoperable across multiple locations and with other organizations.

(source: HIMSS Europe - Strategic Interoperability: The Clinical and Business Imperative for Healthcare Organizations - November 2013)

IMPORTANCE OF INTEROPERABILITY

5,7 in 7 European Hospitals (comprises German, Spain and United Kingdom)

Level of importance of interoperability on overall organizations' strategy.

(source: HIMSS Europe - Strategic Interoperability: The Clinical and Business Imperative for Healthcare Organizations - November 2013)

