

SNOMED - A TOOL FOR SEMANTIC INTEROPERABILITY IN E-HEALTH SYSTEMS

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There are many possible benefits of using SNOMED CT (Systematized Nomenclature of Medicine Clinical Terminology) but we would like to focus on the aspect of semantic interoperability. Very broad definition of interoperability [1] is: “In the context of e-Health, interoperability is the way in which reliable data is provided and communicated in a secure, accurate and efficient way. It has to surmount barriers of national policies, culture, language and systems of medical knowledge representation and use of ICT’s”.

The topic of our interest is semantic interoperability of Electronic Health Record (EHR). The prerequisite for that is the standard clinical terminology and the main candidate is SNOMED CT. By using internationally agreed coding system SNOMED surmounts the barriers for transmitting the medical data, e.g. EHR, from one country to the other, because decoding the documentation is performed in the language of target country.

In 1964 the College of American Pathologists (CAP) developed the Systematized Nomenclature of Pathology (SNOP). It was the first attempt to structure the medical terminology into the integrated, multidimensional nomenclature system. Present version of SNOMED CT includes ca 300 000 terms used in human and veterinary medicine.

The nomenclature is the complete set of terms used in a given domain. The concept of medical meta language adapted to registration, storage and computer processing of medical data is the SNOMED background.

SNOMED has been translated from English into German, Spanish, Danish, Polish (SNOMED II) and preparations are under way for translating it into Lithuanian.

There is an interest in SNOMED in many institutions such as WHO, ASEM, Commonwealth and others. That is why ISfTeH is also interested in promoting its dissemination which would enable semantic interoperability.

There is a proposal of creating SNOMED Standards Development Organization (SDO).

Its goal is to offer countries the opportunity to take a leading role, in the development ownership and maintenance of SNOMED CT. Nations participating in SDO will have the right to use SNOMED CT in their systems.

Conclusions:

- SNOMED should be put into medical curriculum worldwide in order to obtain its knowledge by the medical staff (academic license?),
- Plan of SNOMED implementation should be devised – may be different in different regions and different countries,
- International SDO creation is a very good move which ISfTeH fully supports. It can solve license and financial problems in many countries,
- The barrier to SNOMED implementation may be lack of activities promoting use of standards and emphasizing their practical, scientific and financial significance.

Keywords: SNOMED, interoperability, eHealth, nomenclature

References:

[1] Towards Interoperable eHealth for Europe. Telemedicine Alliance. BR 255, Nov. 2005