201913 How SNOMED CT can support a mobile app for the citizen empowerment

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Summary

One of the main challenges in developing mobile health applications for the citizen is how to gather data from the different information systems and to display it in a clear and intuitive way. Adopting standards and terminologies (such as HL7 FHIR and SNOMED CT, respectively) could be the answer.

Audience

Healthcare Professionals, Governmental Entities, Citizens, Health Informatics Professionals, Policy/administration

Learning Objectives

This work demonstrates the importance of using SNOMED CT on FHIR, and how it can promote the cross-border movement of information and the quality of care provided.

Abstract

It is undeniable that we currently live in an era in which mobile phones are increasingly present in our lives and we already use these devices to manage most of the issues of our personal life. Our health should not be different! As a matter of fact more than 67% of access to new SNS24 website for citizens health information in Portugal is done via mobile devices.

The unprecedented dissemination of the mobile communication technologies that have been verified over the last years, has promoted the operationalization of mHealth initiatives. Mobile Health (or mHealth) is defined as medical and public health practice supported by mobile devices.

Portugal developed a mobile app called "MyNHS Wallet" that return the citizen health information, existing in the different Portuguese information systems. This implies the gathering of information from different clinical systems, captured in a variety of ways – nowadays, data interoperability is a major challenge facing healthcare systems. The usage of standards (HL7 FHIR – an interoperability standard intended to facilitate the exchange of healthcare information between information systems) and terminologies (such as SNOMED CT) can hold the key to solve some of these challenges.

For instance, the Patient Summary has a minimum set of essential information (such as patient identification, allergies, chronic medication, immunisation information, medical and nursing diagnosis or medical procedures/devices) for health professionals whenever there is a need for urgent or scheduled care in a national or foreign health entity. As the allergies and the immunisation information are registered based on SNOMED CT terminology, it means that those registries are structured, normalized and standardized. Through interoperability mechanisms, this information can be integrated with MyNHS Wallet app which means that the citizen can transport

essential information for the provision of health care. This translates into a huge leap, where the citizen becomes aware, in a facilitated way, of his health information that is registered in the various information systems. Everything is transparent for the citizen, he can validate if the allergies registered are correct or if something is missing, he can view/show his health information when necessary, whether in Portugal or in another country, and he can do this in different languages (EN is the first version) thanks to the usage of SNOMED CT codes.

Semantic interoperability allows two or more systems to communicate maintaining meaning. it clearly supports cross-border movement of information and ultimately, health system interoperability, which in the end translates into improvement of the quality of care provided. Thus, improving or possibly saving lives.