An Ontology for Regulating eHealth Interoperability in Developing African Countries

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Abstract

eHealth governance and regulation are necessary in low resource African countries to ensure effective and equitable use of health information technology and to realize national eHealth goals such as interoperability, adoption of standards and data integration. eHealth regulatory frameworks are under-developed in low resource settings, which hampers the progression towards coherent and effective national health information systems. Ontologies have the potential to clarify issues around interoperability and the effectiveness of different standards to deal with different aspects of interoperability. Ontologies can facilitate drafting, reusing, implementing and compliance testing of eHealth regulations. In this regard, we have developed an OWL ontology to capture key concepts and relations concerning interoperability and standards. The ontology includes an operational definition for interoperability and is an initial step towards the development of a knowledge representation modeling platform for eHealth regulation and governance.