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A Conceptual Framework for Assessing the Development of Health Information Systems Enterprise Architecture Interoperability

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Abstract : Health Information Systems (HISs) interoperability is emerging to be the future of modern healthcare systems Enterprise Architecture (EA), where healthcare entities are seamlessly interconnected to share healthcare data. The reality that the healthcare industry has been characterised by an influx of fragmented stand-alone e-Health systems, which present challenges of healthcare information sharing across platforms, desires much attention for systems integration efforts. The lack of an EA conceptual framework resultantly crates the need for investigating an ideal solution to the objective of Health Information Systems interoperability development assessment. The study takes a qualitative exploratory approach through a design science research context. The research aims to study the various themes withdrawn from the literature that can help in the assessment of interoperable HISs development through a literature study. Themes derived from the study include HIS needs, HIS readiness, HIS constraints, and HIS technology integration elements and standards tied to the EA development architectural layers of The Open Group Architecture Framework (TOGAF) as an EA development methodology. Eventually, the themes were conceptualised into a framework reviewed by two experts. The essence of the study was to provide a framework within which interoperable EA of HISs should be developed.

Keywords : enterprise architecture, eHealth, health information systems, interoperability
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