Lecture Notes in Computer Science

Guiding the development of interoperable health information systems: A conceptual IT governance framework

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Abstract

In the midst of dynamic healthcare needs, health information systems' lack of interoperability continues to hinder the health sector's ability to provide healthcare services. For instance, the recent COVID-19 epidemic has sparked discussion about the health department's ability to meet healthcare needs and the readiness of the National Health Insurance initiative in South Africa. Moreover, operating in resource-constrained circumstances presents a further obstacle and raises questions as to whether quality healthcare services can be delivered to patients. Following the Design Science Research Methodology (DSRM) process, this paper developed an IT governance conceptual framework, termed the HISIG-CF, to inform the interoperability of health information systems. The HISIG-CF was developed using literature and insights garnered from qualitative data using expert reviews from practitioners in the healthcare industry. The results indicated a need for more guidance to inform interoperability interventions and strengthen current health information systems through the use of well-defined IT Governance frameworks and mechanisms. Furthermore, the HISIG-CF was deemed adequate to improve health information systems interoperability within the healthcare sector in the North West, with prospects for usage across South Africa.