

Abstract

The existing health information system in Sri Lanka heavily depends on traditional paper based manual reporting mechanisms which have shown to be inefficient, error prone and cumbersome. To mitigate these issues some of the health institutions have already begun developing their own IT solutions. However due to the absence a of national health information system architecture those systems lack the overall information integrity, central coordination and information interoperability. Therefore the need of high level electronic health information system architecture was identified to overcome above mentioned problems and also to cater the increasing demand for electronically accessible services in the health domain.

Using principles of enterprise architecture the existing health information system was analyzed with regards to the organizational, administrative, functional structures and in the perspective of stakeholders and their needs. Architectural models of health information systems in different countries were also analyzed and a common set of features was identified.

An Architectural model for the national health information system was derived in the context of the Sri Lankan health domain to achieve efficient, interoperable, secure, reliable, accessible and maintainable health information system.

The proposed national electronic health information system architecture is composed of eHealth system, stakeholders and communication network. Identified services of the health domain expected to be provided by one or more sub-systems. National eHealth system will be composed of the above mentioned sub-systems, which will be implemented according to service oriented architecture. Three categories of stakeholders were identified; health service managers, health service providers and health service consumers. Stakeholders will be communicated with the eHealth system through the communication network which will be composed of State Health Network and the Internet. State Health Network will only be accessible to the state sector health service administrators and the state sector health service providers. A Health Information Portal will be introduced to the country to provide health information and selected services to all the stakeholders through the internet. Private sector health service providers will be authorized to access shared eHealth services through the Health Information Portal.