

Strategy to Reinforce Security in Telemedicine Services

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Abstract— Demand for medical services is increasing rapidly because of worldwide aging and increase in population. Most countries are trying to introduce and disseminate telemedicine service (TMS) to decrease the necessary budget for health services. However, many doctors are concerned about the security of telemedicine services. Security of medical information should be reinforced for widespread use of telemedicine. This study analyzes telemedicine services between patient and doctor, especially medical information security of clinics and medium-size hospitals because these clinics and hospitals typically use PCs, servers, and vendor software. Furthermore, these clinics and hospitals usually do not employ security specialists and are more vulnerable to medical information security threats. This paper considers the security aspects of telemedicine and the Internet of things (IoT) together, because, after all, healthcare-devices perform a function of telecommunication. This paper reviews the necessity and strategy for enhancing security of medical information systems. The risk of data leak in medical information systems is analyzed quantitatively and is used to support the need for reinforcement of security.

Keywords: Telemedicine, IoT telemedicine, Telemedicine security, U-health security, security



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