

Health Information Safety and Security: Threats and Solutions

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Abstract

Patient safety is a subset of healthcare and is defined as the avoidance, prevention, and amelioration of adverse outcomes or injuries stemming from the process of health care. There is a vital role of Information communication technology (ICT) in Healthcare providers. Health information technology presents numerous opportunities, including reducing human errors, improving clinical outcomes, facilitating care coordination, improving practice efficiencies, and tracking data over time. This research was conducted to identify the threats in Healthcare Information Systems (HIS). The study was conducted in three different departments namely, Information Technology Department (ITD), Medical Record Department (MRD) and X-Ray Department, in two of the leading government-supported hospitals in Nigeria. The data were collected using in-depth structured interviews. The study identified 5 types of major threat. The result shows the most critical threat is data security (data theft). Another threat is human/user error. Hackers and the rise of “Hacketivism” is another challenge facing the Healthcare Information System across the globe. More so, outdated technology in hospitals is also a challenge that needs to be addressed. Another threat is the disclosure of patient’s information or private data. Power failure is also a threat as well. There are solutions to curb the threats posed against Healthcare Information Systems. Developing models, methods, and tools to enable risk assessment is very important. Developing standard user interface design features and functions and ensuring software safety in an interfaced, network-enabled clinical environment. Developing real-time methods to enable automated surveillance and monitoring of system performance and safety. Establishing the cultural and legal framework/safe harbor to allow sharing of information about amongst others.

Keywords: Patient safety; Healthcare provider; Healthcare information technology; Privacy

