SECURITY CHALLENGES OF HEALTH INFORMATION SYSTEMS: A SYSTEMATIC REVIEW

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ABSTRACT

Introduction: Because a huge amount of health information is stored and transferred using information technology, the issue of information security is of high importance. The aim of this study was to review security challenges in health information systems. The main focus was on managerial aspects of information security in health information systems.

Methods: This was an organized review of 104 full-text articles published between 2000 and 2016. A systematic literature review was conducted using databases PubMed, Science Direct, Scopus, and Web of Knowledge. Only studies published in English, research or review papers with the keywords in the title or the abstract were selected.

Results: In total, 26 papers were selected according to the inclusion criteria. The main point reported in these studies included the need for an information security policy with practical solutions. It means that, to improve privacy and security of health information, not only technical aspects, but also nontechnical issues need to be addressed.

Conclusion: To improve health information security, the technical solutions should be supported by the managerial strategies. Among the risks and threats to information security, unauthorized access to the information is the most challenging issue. Therefore, apart from the technical solutions, it is necessary to develop an information security culture to protect information and information systems.

KEYWORDS: Security challenges, Health information system, Information technology

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