Development of an Intelligent Approach for Medical Knowledge Discovery and Decision Support

Abstract

Electronic knowledgebase (including Electronic Medical Record), together with inference procedures, form an intelligent medical information systems that offers many possibilities for health care providers. It acts as a strong base for scientific upgrading and provides an enormous support for developing new medical decisions. This paper proposes an intelligent neurosurgical decision support system framework. This framework merges the advantages of electronic medical record, rough set theory, clinical pathways, latest available scientific researches, and patient’s expectations. We have designed and developed this aiming to get a support system for predicting the ideal treatment method of lumbar disc patients, in addition to evaluating the treatment plan. The system ensures future up-to-date knowledgebase, through permitting upgrading with the most recent innovations in knowledge and discoveries. This framework is expected to improve the quality of health care by providing the necessary requirements of neurosurgery domain.
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Index Terms

Computer Science

Information Sciences

Keywords
Electronic Medical Record; Rough Set; Patient’s Expectations; Medical Decision Support System; Android