Using Associations based Method among Prescribed Medications in Egyptian Public Clinics

International Journal of Computer Applications
Foundation of Computer Science (FCS), NY, USA

Volume 154
Number 3

Year of Publication: 2016

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10.5120/ijca2016912046

Abstract

Paper based-prescriptions that are not entered electronically in Egyptian public clinics lead to loss the opportunity of association investigation among prescribed medications, track improper prescriptions and handle patient health record. Developing electronic prescription service can assign a positive impact in such case.

In this paper, performing data mining on data collected from paper based- prescriptions ordered by the prescriber and entered electronically as data set to analyze the associations among prescribed medications. Eleven association rules were resulted from the assigned prescribed medication in those prescriptions using the FP-Growth (frequent pattern) algorithm. The accuracy of these rules was reviewed by a clinical pharmacist. Among these association rules, Julmentin 1gm and Allergyl tabs are the most associated medications resulted as first ranked then Pirafene syrup and Julmentin 1gm resulted as second ranked. The results of this study indicate that developing electronic prescription service can lead to significant knowledge in prescribing patterns.
References


Index Terms

Computer Science  Biomedical
Keywords

Data Mining, Association Rules, FP-growth method, e–prescription service, prescribing errors, clinical pharmacist, Egypt