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MINING OF DRUGS REACTIONS IN PATIENTS WITH MALARIA USING APRIORI ALGORITHM

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ABSTRACT

Data mining refers to the entire process of extracting useful and novel patterns or models form large data sets. With the widespread use of medical information systems that include databases, which have recently featured explosive growth in their sizes, physicians and medical researchers are faced with a problem of making use of the stored data. Data mining can be used to help predict future patient behavior and to improve treatment programs. By identifying high-risk patients, clinicians can better manage the care of patients today so that they do not become the problems of tomorrow.

One of the most dreaded diseases in Nigeria today is Malaria. Lots of drug has been discovered for this but it is noticed that most of the drugs are not effective in everyone. When a new drug is introduced unexpected drug reaction go unnoticed until large numbers of cases are reported by the diagnosed patients. Therefore, in exploring the capability of data mining so that the drug prescribed by the doctor is more efficient and of low risk of reactions to patients, this project was embarked upon.

Drug reaction can occur during treatment with pharmaceutical products. It can result in unnecessary and often fatal harm to patients. Several factors are responsible for the reaction of drug such as the patient's age, sex, blood group and genotype. Every anti – malarial has side effect and their rate of severity depends on this factors. Hence this model was developed to mine reaction of drugs in patients. The plots showed that different anti – malarial has different local support and also have different level of reaction compared to each other. From the model generated from the mined data set of the university health center using Apriori algorithm, it was recommended that, patient already having any symptom that is the same with the drug reaction that has exceeded the confidence value should not be given such drug.

KEYWORDS: *Apriori Algorithm, Abnormal Class, Data Mining, Drugs Reaction, Local Support, Mysql, Php.*