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Title	An Automated ICD-10 Code Assigning System using A Classification Method
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Abstract

At present, hospitals in Thailand have to manually analyze patient treatment data for assigning the disease diagnostic code, or ICD-10 (International Classification of Diseases and Related Health Problem 10th Revision) code. The ICD-10 codes are collected and submitted to the Ministry of Public Health to collect Thailand's disease incidence statistics and allocate a budget for the development of the country's health system. Some hospitals have difficulty recruiting personnel with expertise in analyzed and assigned ICD-10 codes, causing a long working time and a problem with the accuracy of the analyzed and assigned ICD-10 codes, due to many patients daily. This paper presents the automated ICD-10 code assigning system developed for solving the problem of analyzing and assigning the ICD-10 code manually by a human expert in the hospitals. The system uses a classification method with a decision tree diagram as the model to classify the ICD-10 codes from patient treatment data, i.e., medicine and laboratory results. The system can be used as a tool to support a medical staff who is the expertise that analyzes and assigns the ICD-10 code in a more accurate and rapid manner. The evaluation of the classification result with the decision tree model is found to be 91.67 percent accurate in performance for the ICD-10 codes assigned.