

## Hypertension Drug Suitability Evaluation Based on Patient Condition with Improved Profile Matching

Hari Soetanto, Sri Hartati, Retantyo Wardoyo, Samekto Wibowo  
Universitas Gadjah Mada, Sekip utara, Bulak sumur, Yogyakarta, Indonesia

---

### Article Info

#### *Article history:*

Received Jan 2, 2018  
Revised Feb 23, 2018  
Accepted Mar 6, 2018

#### *Keywords:*

Drug suitability  
Hypertension  
Profile matching  
Interpolation

---

### ABSTRACT

The accuracy of the type or dosage of drugs by doctors is important. The types and doses of medicines given by the doctors should match the illness suffered by the patient as well as consider the patient's health condition. In hypertension disease, the error rate of drug dosage by medical personnel is quite high, reaching 34%. Meanwhile, the administration of the type and dosage of drugs appropriate to the patient's condition required the knowledge of high medical personnel and experienced medical personnel. In this research, we developed the model of drug suitability evaluation with hypertension patient's health condition using Profile Matching method. The proposed model evaluates the patient's health condition based on the parameters provided by the expert and produces recommendations on the type of drug. To optimize the Profile Matching method, in this research we applied interpolation weighting method which calculates the proximity level of the patient profile with drug profile more accurately. Based on the experiment, the proposed model has an accuracy value of 87%, precision 87.11% and recall of 85.44%. It proves that the proposed method can provide recommendations on the right type of hypertension medication. Also, the interpolation weighting method is proven to increase the accuracy.

*Copyright © 2018 Institute of Advanced Engineering and Science.  
All rights reserved.*

---

*Corresponding Author:*