Nurse Rostering through 0-1 Multi Objective Programming for ICU Department of DR Shariati Hospital in Isfahan

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Abstract

In this study, a 0-1 goal programming model is developed for nurse scheduling. It is adapted to Isfahan Dr Shariati hospital program (in Iran) to improve the current manual made schedules. The developed model accounts both for hospital objectives and nurses’ preferences, in addition to considering some policies related to nurse scheduling. Hospital objectives include to continuous service with appropriate nursing skills and staffing size. Nurses’ preferences include fairness considerations, in term of ratio of night shifts, days off, more morning and evening shifts. After formulating these constraints and objective function, the model is solved by LINGO 8 software. The findings of this research show that a model can be presented for nurse scheduling through 0-1 goal programming model with hierarchical analysis process in a manner that both hospital regulations and nurses’ preferences are satisfied. 0-1 goal programming, nurse scheduling, AHP, Isfahan Dr Shariati Hospital.