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Facility Location Problem of Dynamic Optimal Location of Hospital Emergency Department in Palembang

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Abstract

The Emergency Department (ED) is one part of a hospital that provides initial treatment for patients who suffer from illness and injury, which can threaten their survival. The importance of integrated care in the ED is one of the keys to successfully treating patients at an advanced level. This becomes complex because the ED works in a team consisting of various multi-disciplinary sciences and limited human resources, facilities, and infrastructure. In the City of Palembang, 23 hospitals have emergency room facilities from 18 Sub-Districts, by using the TOPSIS (Technique for Others Reference by Similarity to Ideal Solution) method to vary the distance (radius) the optimal location of the emergency department is obtained according to the number of hospitals that have emergency room facilities, namely Ilir Timur I District, Ilir Barat I District, Sukarami District, and Plaju District. Based on the formulation of the p-median model and the completion of the TOPSIS method, the order of Districts that have optimal locations from 18 Sub-Districts that have emergency department facilities in the City of Palembang is obtained. © 2022, Research Center of Inorganic Materials and Coordination Complexes, FMIPA Universitas Sriwijaya. All rights reserved.

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