

A Simulation Model for Performance Improvement of Triage-Based Emergency Care

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Abstract— The paper presents a discrete event simulation model to evaluate the performance in an emergency department. Following evaluation of current state of emergency care, the study proposes establishing a general medicine clinic within or next to the emergency department such that patients with low emergency priorities can be directed to the clinic where they can see a non emergency physician. Results obtained from testing the proposed model illustrate performance advantage with respect to urgent classified cases ranging from 19.27% to 24.36% reduction in waiting time compared to it in the traditional emergency department system.

Index Terms— Emergency department, discrete event simulation, emergency care, triage

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