

APPLICATION OF QUEUING THEORY IN BED-OCCUPANCY MANAGEMENT IN HEALTH CARE

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Abstract

Queuing Theory is not new but only recently has healthcare begun to use it effectively. The hospital management is the most important problem for public utility. The chief aim of the hospital is to provide better facilities and quicker service to the patients coming for treatment. The hospital management has to arrange properly the allocation of beds for patients in different wards and deputation of doctors for the efficient and quick service to the patients. The purpose of this paper is to present a way of optimizing the use of hospital resources in order to improve hospital care. Long waiting time in any hospital is considered as an indicator of poor quality and needs improvement. We present a technique for optimizing the number of beds in order to maintain an acceptable delay probability at a sufficiently low level.

Key Words : *Waiting time, Poisson Queue, Balking, Reneging.*