عنوان مقاله:

Performance measurement of healthcare processes in hospitals by the Queuing Network approach

محل انتشار:

کنگره بین المللی علوم و مهندسی (سال: 1396)

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خلاصه مقاله:

Modeling, analysis and management of patient flow has important role in performanceanalysis and improving hospital processes. Analytical queuing models can be very useful to represent patient flow and to analyze the hospital system's performance. This paperreports on modeling the flow of patients in various hospital units. The model includesvarious possible care pathways that depend on relevent factors for example intensity andtype of disease, doctors's decisions, improvement in patient's health status and differentrouting rules and resource constraints. Patient flow scenarios were represented as queuingnetworks and solved by an analytic approach. Performance of the proposed queue modelwas measured by evaluations for averages of response time, queue length and waitingtime of the various units and pathways. Finally, to show performance of the model, a casestudy was considered in which values of parameters collected from a hospital.

کلمات کلیدی:

Patient flow, Hospital processes, Queueing theory, Markov models

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