

Length of Hospital Stay and Quality of Care

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Abstract The relationship between Length Of hospital Stay (*LOS*) and *Quality-of-Care (QofC)* is demanding and difficult to assess. Indeed, a multifaceted intertwining network of countless services and *LOS* factors is available, which may range from organizational culture to hospital physicians availability, without discarding the possibility of lifting the foot on intermediate care services, to the customs and cultures of the people. On health policy terms, *LOS* remains a measurable index of efficiency, and most of the studies that have been undertaken show that QoC or health outcomes do not appear to be compromised by reductions in *LOS* times. Therefore, and in order to assess this statement, a *Logic Programming* based methodology to *Knowledge Representation* and *Reasoning*, allowing the modeling of the universe of discourse in terms of defective data, information and knowledge is used, being complemented with an *Artificial Neural Networks* based approach to computing, allowing one to predict for how long a patient should remain in a hospital or at home, during his/her illness experience.

Keywords Length of hospital stay • Logic programming • Knowledge representation and reasoning • Artificial neural networks

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