

An Assessment on the Length of Hospital Stay through Artificial Neural Networks

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Abstract. The attitude of stashing costs and preventing people of any kind of intervention on the valuation of the problem referred to above, may undermine their belief on present society values and on their way of living. Cutting funds from Education to Health is at best delaying the inevitable *crash* that is foreshadowed. Indeed, regarding people, a major concern may be described as jeopardizing their health condition, i.e., providing healthcare is a very sensitive issue and prunes to drastic changes in short spaces of time. Factors like age, sex, and context – house conditions, daily lives – should also be central when deciding how long a specific patient should remain in a hospital. In no way, ought this be decided by economic circumstances alone. To fulfill this goal, a Logic Programming based approach is used for knowledge representation and reasoning, letting the modeling of the universe of discourse in terms of defective data, information and knowledge. Artificial Neural Networks are enforced as the computational framework, allowing one to predict how long a patient should remain in a hospital.

Keywords: Healthcare, Length of Hospital Stay, Logic Programming, Knowledge Representation and Reasoning, Artificial Neuronal Networks.