Chapter 2
Evaluation of Nosocomial Infection Risk Using a Hybrid Approach

José Neves
Universidade do Minho, Portugal

João Neves
Drs. Nicolas & Asp, UAE

Eva Silva
Universidade do Minho, Portugal

Henrique Vicente
Universidade de Évora, Portugal

ABSTRACT

Nosocomial infections have severe consequences for the patients and the society in general, being one of the causes that increase the length of stay in healthcare facilities. Therefore, it is of utmost importance to be preventive, being aware of how probable is to have that kind of infection, although it is hard to do with traditional methodologies and tools for problem solving. Therefore, this work will focus on the development of a decision support system that will cater for an individual risk evaluation tool with respect to catch nosocomial infections. The Knowledge Representation and Reasoning procedures used will be based on an extension to the Logic Programming language, allowing the handling of incomplete and/or default data. The computational framework in place will be centered on Artificial Neural Networks. It may be emphasized that in addition to the nosocomial infections risk evaluation, it is provided the Degree-of-Confidence that one has on such a happening.

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