

# Data Mining Applications in the Context of Casemix

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## Abstract

*In October 1999, the Singapore Government introduced casemix-based funding to public hospitals. The casemix approach to health care funding is expected to yield significant benefits, including equity and rationality in financing health care, the use of comparative casemix data for quality improvement activities, and the provision of information that enables hospitals to understand their cost behaviour and reinforces the drive for more cost-efficient services. However, there is some concern about the “quicker and sicker” syndrome (that is, the rapid discharge of patients with little regard for the quality of outcome). As it is likely that consequences of premature discharges will be reflected in the readmission data, an analysis of possible systematic patterns in readmission data can provide useful insight into the “quicker and sicker” syndrome. This paper explores potential data mining applications in the context of casemix by using readmission data as an illustration. In particular, it illustrates how data mining can be used to better understand readmission data and to detect systematic patterns, if any. From a technical perspective, data mining (which is capable of analysing complex non-linear and interaction relationships) supplements and complements traditional statistical methods in data analysis. From an applications perspective, data mining provides the technology and methodology to analyse mass volume of data to detect hidden patterns in data. Using readmission data as an illustrative data mining application, this paper explores potential data mining applications in the general casemix context.*

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**Key words:** *Casemix-based funding, Enterprise Miner, Premature discharges, Predictive modelling, Readmission data*

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