Improving Outcome Risk Management throuth Learning from Adverse Events

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Abstract

Adverse events in health care organizations (HCOs) are more than a serious concern. Over the last few years the awareness of this problem has raised and different organizational solutions have been tried. In general, an adverse event is defined as an unwanted damage and uneasiness due to health service's supply which provoke morbidity, mortality or a longer hospital stay; the damage and the uneasiness should not be related to the natural worsening of patient disease. The adverse events generally hit patients and are due to causes which are related to the health process.
Risk management involves all activities and actions performed to improve health care performances and to guarantee security of patients; the security is also based on learning from events. This paper is aimed at proposing risk management as the basic methodological approach to deal with adverse events by the HCOs. In our case, we will concentrate on the problem of managing clinical risks: they're a sub-category of risk management related to the particular service supplied (the health care delivery). Our focus is patient safety, i.e. the basic problem that diagnostic and therapeutic practices may cause adverse events that influence the hospitalization and mortality risks of patients.
The method is described both at a theoretical and empirical level, thanks to its application to a haemodialysis department. We also analyze how the clinical risk impacts on expected costs both for the patients and the clinical department.
The developed prototype is consisting of two elements: an "Incident Reporting System" (called Hemostat) and a graphical model (Bayesian Network); here we describe only the latter one. The Bayesian network approach estimates clinical risk and proposes therapeutic and strategic decisions. Whenever a risk is not acceptable, it is necessary to take decisions, in order to avoid it or to reduce its probability. For our case study, we consider only prevention and protection factors and not insurance issues. We have identified CR through the collection of information about current and past patient care occurrences, i.e. unexpected treatment outcomes that may generate possible safety risk.
Our ultimate goal is to improve patients' outcome and to develop a "patient safety index" to be exploited by HCOs. We evaluate current exposure and seriousness of risk in terms of the severity of patient and department and frequency of occurrence with the purpose to take decisions on risk acceptability. Like a consequence of the decisions, the department has to control the correct implementation of them and updates the risk estimations: a new clinical risk management process starts.

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