

# Abstract

The aim of this thesis was to explore options for hospital profiling in the Slovak republic. Sacrificing breadth of the study in favor of depth, the scope of the analysis was narrowed down to one quality indicator only – mortality. In the first step a mortality prediction model was constructed in order to predict expected probability of death on the basis of a set of risk factors in order to filter away variation in hospital outcomes that is caused by other factors than quality of care. Validation of the model was performed on a validation sample of 25% of data. Discriminative ability of the final model is very high – c-statistics over 0.9. Furthermore, we verified that hospitals differ in the risk structure of their patient populations significantly – mean predicted probability of dying for hospitals differed from 0.02% to 33%. In the second step hospital profiling was performed. Standardized mortality ratios were calculated for each hospital as a difference between observed and expected number of deaths. After introduction of risk-adjustment and calculation of confidence intervals 43% of hospitals were re-classified. 30-day mortality was selected as the best indicator for hospital profiling.