

Abstract

The thesis measures the performance of DRG classification system that serves as inpatient care reimbursement system in the Czech Republic. Measurement is performed via reduction of variance (R^2), i.e. the ability of DRG classes to explain the variance of hospital length of stay (LOS) on various complexity levels within multiple linear regression framework. It also studies the effects of other variables including districts, types of hospitals, age and sex on LOS, employing (zero-truncated) negative binomial models. A large, yet unused patient-level data set covering all hospitalizations in 2011 is being exploited. Our results suggest that DRG system used in 2011 performed reasonably well, though there is enough room for further optimization. We also found that university hospitals, narrowly specialized and large regional hospitals tend to exhibit shorter LOS than other hospitals and each additional year of age and being a woman have a positive effect on LOS.