

# **Die Rolle von Vergütungssystemen bei der regionaler Planung von stationären Krankenhauspatienten**

**Georg Schneider, Marion Rauner, Kurt Heidenberger, Universität Wien, Österreich**

This study presents a non-linear optimisation model for investigating the optimal allocation of both budgets and inpatients with different treatments among hospitals within a geographic region such as Vienna. The objective function maximises the overall quality of treatment provided by regional hospitals. We compare the effects of two different reimbursement systems – fixed versus variable budgets – on optimal allocation strategies. The combination of modelling ideas from hospital location-allocation models and economic models to solve such a problem is new, according to the literature. We found that fixed budgets outperformed variable budgets as fewer Euros had to be invested for an incremental unit of quality of care provided in most of the policy scenarios analysed. Regional demand and supply patterns for different treatments affect the decision makers' choice of the most suitable reimbursement system. In our illustrative example two hospitals appeared inefficient regardless of the reimbursement system. Vienna policy makers are currently considering restructuring these hospitals. They plan to merge one with nearby hospitals and transform the other into a nursing home.

**Dieser Beitrag erscheint in Kürze im IMA Journal of Management Mathematics.**