

Effects of DRGs on length of stay and readmissions in acute care hospitals in Switzerland

France Weaver (University of Geneva), Marcel Widmer (Swiss Health Observatory)

The objective of this study is to estimate the overall effect of DRGs on length of stay (LOS) and the risk of readmission at 18, 30, 60 and 180 days for acute inpatient care in Switzerland. In addition, the overall effect is decomposed into short-term —within one and two years after adoption— and longer term effects. In 2002, the AP-DRG payment system was introduced in 10 hospitals. By 2010, 26 out of 156 hospitals had implemented it; treating one third of all acute care patients. One goal of this prospective payment system (PPS) is to generate efficiency gains and reduce LOS, which are among the longest in OECD countries. Such PPS may also create adverse effects, such as increasing readmission rates. We take advantage of variations in payment systems across hospitals and over time to estimate difference-in-difference (DD) two-level generalized linear models. Such design adjusts for time trends and time-invariant unobserved heterogeneity across hospitals, such as canton specific policies. The analysis is conducted on all acute care discharges of patients aged 18+ covered by the compulsory health insurance between 2001 and 2010. The sample includes 4.6 million observations. Overall, the DRGs have not impact on LOS but a significant reduction in LOS is detected in the first year after adoption. The DRGs slightly increase readmission rates up to 30 days but no effect is detected for readmissions beyond 30 days. The results inform policy in light of the nationwide introduction of the SwissDRG system in all Swiss hospitals in January 2012.

October 9th 2012.