

# Assessing the cost of diabetes mellitus related acute cardiovascular events in Slovenia: Building the evidence base for improved treatment and disease management practices

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**Introduction:** Increased prevalence of diabetes and related events put large strains on public health care systems. The risk of cardiovascular disease mortality and morbidity is 2 to 4 times higher for patients with diabetes. The aim of this study is to investigate the occurrence of diabetes mellitus (DM) related acute cardiovascular (CV) events in Slovenia and assess their cost. A detailed cost analysis and assessment of cost data reliability is namely a key input for economic evaluation of interventions aimed at improving diabetes treatment and disease management.

**Methods:** The study was performed from the payer perspective and direct medical costs of DM related acute CV events were estimated. Relevant inpatient care data for the 2013-2015 period were obtained from the National Institute of Public Health. DM related CV events comprise data on myocardial infarction, unstable angina, stroke and transient ischemic attack.

**Results:** There were 26,082, 27,347 and 26,858 hospitalisations of patients with diabetes in 2013, 2014 and 2015, respectively. In the same period the number DM related CV events ranged between 2,103 and 2,191. This study addresses both overall costs of all CV events and their levels for individual events. We compare the cost levels obtained under different versions of the DRG payment model and we observe age, gender, profession and geographic differences.

**Conclusions:** Analysis of occurrence and cost of DM related CV events by geographic regions, gender, age and areas of economic activity may prove useful in decision-making in diabetes prevention and care improvement planning aimed at reducing DM related events thereby improving health outcomes and alleviating the cost burden. It also emphasises the need to assure reliable cost data and adequate adjustment of payment models so that the implemented measures can indeed be based on sound evidence thereby achieving the expected results.