

How the DRG system really covers the costs of hospitalizations in patients with the diabetic foot - our first experience

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Modified DRG case-mix system was adopted in our country from the German model. Our DRG system differs from the other ones that are usually used in combination with other financing systems for diabetic foot (DF) care refundation in 12 states of EU. Recently in our republic we are confronted with problems of hospitalization refundations in patients with the DF since DRG system is restricted by several factors f.e. by limitations of total expenditure corresponding to 98% of costs detected in 2011. The aim of our study was to compare the real financial profitability of hospitalization refunded by DRG system in different case-mix models of patients with the DF. Methods: Totally 61 cases of hospitalizations for the DF performed from 1/2012 to 12/2012 in our Diabetes Center were included into the study. Based on the main reason of hospitalization the cases were divided into 7 groups - each group contained all hospitalizations for such reason or maximum of 10 cases (group 1- severe infection of the DF treated conservatively, group 2 - PTA, group 3 - PTA with stenting, group 4 - arterial bypasses, group 5 - surgical procedures bellow ankle, group 6 - major amputations, group 7 - combined cases with multiple procedures). The time of hospitalization, relative weights (RW), revenues, costs and profitabilities were compared among all study groups. Inpatient day ("hotel cost") was defined as basic cost including food, accommodation, administration services, nursing and other staff costs. Results: Totally, hospital stay for the DF was 14.6 ± 12 days, RW 2.7 ± 1.7 , revenues 3725 ± 2345 Euro and costs were 7101 ± 5262 Euro on average; the costs exceeded revenues by 88.9%. The subanalysis of total hospitalization costs showed that inpatient days formed 45.1%, anesthesia 2.8%, surgical procedures 5.8%, radiological assessments and interventions 17.8% and the rest - 28.5% of total costs were spent on materials, drugs and laboratory diagnostics. The shortest inpatient stay was observed in group 2 (4.6 ± 2.7 days), the longest in group 7 (32.7 ± 15.2 days), RW was the lowest in group 1 (0.9 ± 0.5), the highest in group 7 (4.7 ± 2.4). Nearly all hospitalizations ended in a negative financial balance. The smallest financial loss was found in group 3 ($-33.7\% \approx -1150$ Euro) and the highest one paradoxically in group 1 with severe infection treated conservatively ($-162.2\% \approx -2014$ Euro). Currently, the lack of financial reimbursement insufficiently covered by DRG system is solved by so-called coefficient of specialization, which multiplies the RW of each case-mix. However, it increases the reimbursement only 1.1-1.5 times. Conclusions: The refundation of hospitalizations by DRG system is not profitable in patients with the DF in our country. Therefore DRG system can limit inpatient care for the DF that implementing international guidelines for the therapy of severe infection, ischemia and surgical procedures. Supported by the project (Ministry of Health, Czech Republic) for development of research organization 00023001 (IKEM, Prague, Czech Republic) - Institutional support