Abstract

Geographic differences in healthcare costs, usage and practice are documented by research from the United States and Western Europe, yet, there is limited information on this topic in the Czech Republic. Spatial variation often seems unexplained by the demographic, health or economic characteristics of the population which points to inefficiencies in the healthcare system. We bring three main contributions: a first study dealing entirely with medical devices; we improve previously used models with a set of environmental indicators and; we work with an entirely new sample which has not been used before. Based on 2012 claims data on medical devices we present a geographic analysis of spending and further analyse spending and usage of three widely used and economically relevant devices. Further, we estimate regression model in order to assess the role of unwarranted variation in spending, which we subsequently expand on the three studied devices. We find significant variation in the per capita spending and usage of healthcare devices at the level of regions and districts, with more than a threefold difference in the relative spending between the regions in the lowest and the highest spending quintile. Moreover, only 38% of the district difference between the highest and lowest spending quintile was explained by our model which leaves 60% of the difference unwarranted.

Keywords

small area analysis, medical devices, geographic variation, spatial variation, unwarranted variation, healthcare, spending, usage, Czech Republic