

# The causal effects of home health care use on mortality and health care expenditures following hospital discharge: The case of Latvia

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## Abstract

The pressures of ageing populations stimulate policy-makers to look for cost-effective opportunities that would go in hand with greater efficiency, quality and better outcomes. In this study, we analyze the efficiency of home health care services in reducing mortality, readmissions, and total health care costs during 365 days after the hospital discharge among the Latvian elderly patients aged 60 and above. This is the first comprehensive study on utility of home health care in the post-transition context. The individual-level data used in this study have been collected from various Latvian administrative data sources, including registers of the National Health Service, the Centre for Disease Prevention and Control, Oncology Register, Psychiatry Register, etc. The obtained data set contains rich information on all the elderly patients who have been hospitalized at least once during the observation period from 2014 to 2018. In our study, we verify three broad hypotheses: home health care reduces the probability of death, hospital readmission, and contains healthcare costs among the discharged patients. These hypotheses are tested within the entire group of elderly patients, as well in specific subgroups, including oncology patients, patients with cardiovascular diseases, etc.

Patients who received home health care services are matched with the control patients discharged with “self-care” applying propensity score matching method. Regressions used to adjust for the observed patient characteristics include a wide set of control variables, including length of hospital stay, manipulations implemented during the hospitalization episode, ambulatory services used, patient’s diagnoses, demographic characteristics, etc. The obtained results propose that home health care after the discharge significantly reduces healthcare costs and probability of readmission and death, however, the magnitude of these effects differs substantially for various patient groups. The obtained results are of particular importance for the development of the efficient health care models and value-based care plans.

## Biography

Irina Mozhaeva is a researcher at the University of Latvia. She holds a PhD in Economics (subfield – Econometrics) from the University of Latvia. Her research and publications focus on long-term care, health economics, social policies, labor market issues etc. She is an administrative data specialist and during the last decade has worked extensively with the Latvian and Estonian (individual level) administrative data, including health care data, social insurance, social assistance data, etc. As an expert she has participated in numerous World Bank and OECD research projects in Latvia and Estonia, e.g. „Estonia: Long-Term Care” Latvia: Active Ageing” Developing a Health System Strategy for Priority Disease Areas in Latvia”, “Connecting People with Jobs”, “Investing in Youth: Latvia”, “Latvia: Who is Unemployed, Inactive or Needy? An Assessment of Post-Crisis Policy Options”, as well as in other national level projects, including “Assessment for Elaboration of the Public Health Strategy 2014-2020”.

## Publications:

1. Who cares? Evidence on informal and formal home care use in Estonia, March 2019 *Baltic Journal of Economics* 19(1), DOI: 10.1080/1406099X.2019.1578478
2. Multidimensional Health Modeling: Association Between Socioeconomic and Psychosocial Factors and Health in Latvia, January 2009 *SSRN Electronic Journal*, DOI: 10.2139/ssrn.1663672



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