

DESCRIPTION FOR THE GENERAL PUBLIC

Progress in the life expectancy and the growing number of people living until the old age intensify the phenomenon of so-called multi-morbidity. The latter is defined as the coexistence of several chronic diseases having similar determinants or resulting from the physiological process of ageing. Consequently, referring only to one disease leading to death becomes to the growing extent insufficient for investigating complex pathological processes. This calls for a new approach in demographic analyses of mortality, more detailed data and appropriate statistical methods.

The principal objective of this study is to assess the scale of multi-morbidity and its contribution to the overall mortality in the most recent years in Poland. What are the most frequent diseases, in particular old-age diseases constituting the multi-morbidity conditions? Are they mostly the main diseases leading to death, risk factors, consequences of morbid conditions or of medical treatment? A special module of the proposed project is dedicated to the quality of cause-of-death data in Poland. We aim at verifying the contents of death certificates with regard to its correctness and coherence, and at testing the occurrence of competing choices in choosing the underlying cause of death. We want to concentrate on mortality due to unknown and ill defined causes: are these causes assigned instead of some specific, well defined diseases? If so, what is the true level of mortality due to those well defined diseases?

We intend to address the above-listed research questions by accomplishing the following objectives: – exploring demographic, regional and medical circumstances of multi-morbidity, – identifying the associations between well and ill defined causes of death, – estimating the scale of mortality due to well defined causes, – investigating the scale of multi cause mortality involving specific diseases frequent at the old age: neurological disorders, cardiovascular diseases, infectious diseases and selected respiratory diseases, obesity and diabetes mellitus and alcohol-related diseases. Statistical methods include linear and Poisson regression models, dependent competing risk models and demographic measures to the multi cause of death approach.

The proposed research project, first of this kind in the Central and Eastern Europe, may deliver pioneer results useful for countries that on the one hand, register an accelerated process of population ageing and, on the other hand, lag in terms of modern health policy programs behind the most advanced countries. By allowing for the entire complexity of pathological processes, the proposed approach provides important implications for the public health policy. The broader impact on academic discipline stems from the integration of medical knowledge with knowledge about demographic tendencies registered at the level of entire populations. The study will improve our understanding of epidemiologic changes and, possibly, allow for more refined theoretical considerations. Finally, it will broaden our knowledge on country-specific registration practices and ‘competing’ choices in assigning underlying causes of death in Poland.