

Filling gaps and adjusting discontinuities: transition to ICD-10 revision in Poland

Agnieszka Fihel^{1,2}

¹University of Warsaw, Warsaw; ²Institut National d'études Démographiques, Paris

Abstract

Long-term mortality series by single causes of death allow for the analysis of epidemiologic tendencies and health policy impacts within a population. Establishing such long-term continuous series requires linking subsequent WHO International Classification of Diseases (ICD) revisions, which cannot be based exclusively on nominal categories of causes of death, but also on coding practices observed in each country. This paper presents such reconstruction of cause-of-death mortality series for Poland since 1980, that is when the ICD-9 and ICD-10 have been in use. The implementation of ICD-10 revision took place in 1997 under unique circumstances, namely strike of medical doctors. One of its form was neglecting the duty of reporting the underlying cause of death, which applied in years 1997-1998 to over 20% death certificates. Therefore, the analysis includes also restoration of mortality data by single causes of death at the local and country level.

Extended abstract

Long-term mortality series by single causes of death allow for the analysis of epidemiologic tendencies and health policy impacts within a population. Establishing such long-term continuous series requires linking subsequent WHO International Classification of Diseases (ICD) revisions, which cannot be based exclusively on nominal categories of causes of death, but also on real mortality trends observed in each country. This is due to many factors affecting the quality of civil registration, starting from the quality of medical diagnosis, through coding practices observed at the local level, till archiving and editorial rules implemented at the national level. Such inevitable bias of mortality data might be, however, corrected insofar as discontinuities in cause-of-death series arising at every transition to subsequent WHO ICD revision. Mortality trends integrating following periods covered by different WHO ICD revisions have already been constructed for several European countries, to mention only Czech Republic, France, United Kingdom, Russia or West Germany. This paper presents first results of analogous analysis done for Poland where in 1997 the ICD-10 revision was implemented.

The enforcement of ICD-10 revision took place under unique circumstances, namely during the strike of medical doctors that lasted from the end of 1996 to mid 2002. One of the form of strike was neglecting the duty of reporting the underlying cause of death, which applied in the two most affected years, 1997-1998, to over 20% death certificates (80.5 and 75 thous., respectively). The scale of protest ranged profoundly across the regions (see Fig.1a,b), and since regions differ with regard to age structure of local population, the structure of unreported deaths by cause must have been different from that of reported deaths. Therefore, the reconstruction of cause-of-death data lacking due to the strike, which was the initial step of establishing long series of mortality in Poland, must have been reduced to the level of small demographic groups, divided by age, sex and place of residence (rural/urban and region). At this low level, the lacking cause-of-death records have been distributed proportionally to reported death certificates, first across the ICD main chapters, and then inside each chapter across single causes of deaths. This estimation gave reasonable results for most causes of deaths (see two examples at Fig. 2a,b).

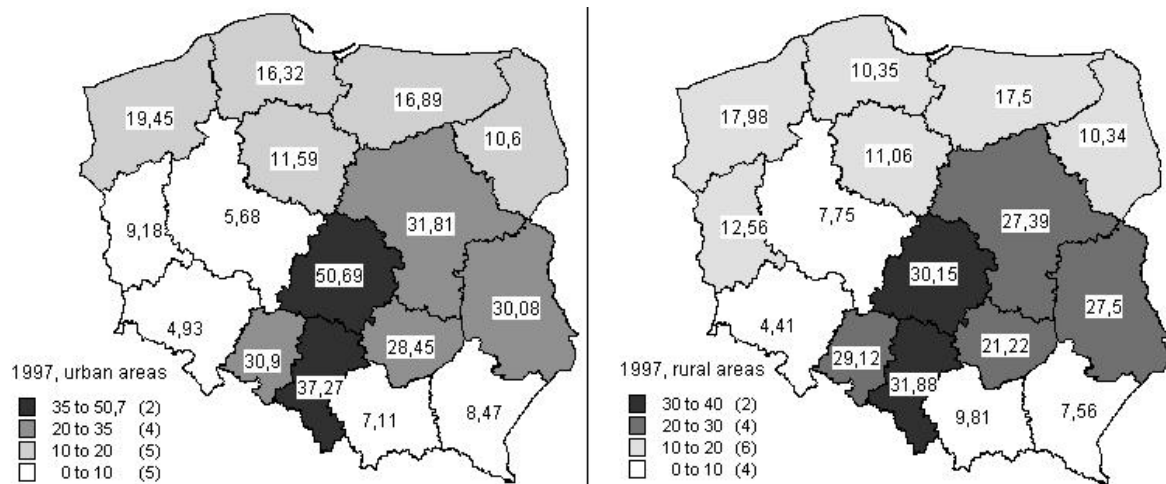


Fig.1a,b. The percentage of non-reported causes of deaths during the strike of medical doctors by regions, Poland 1997

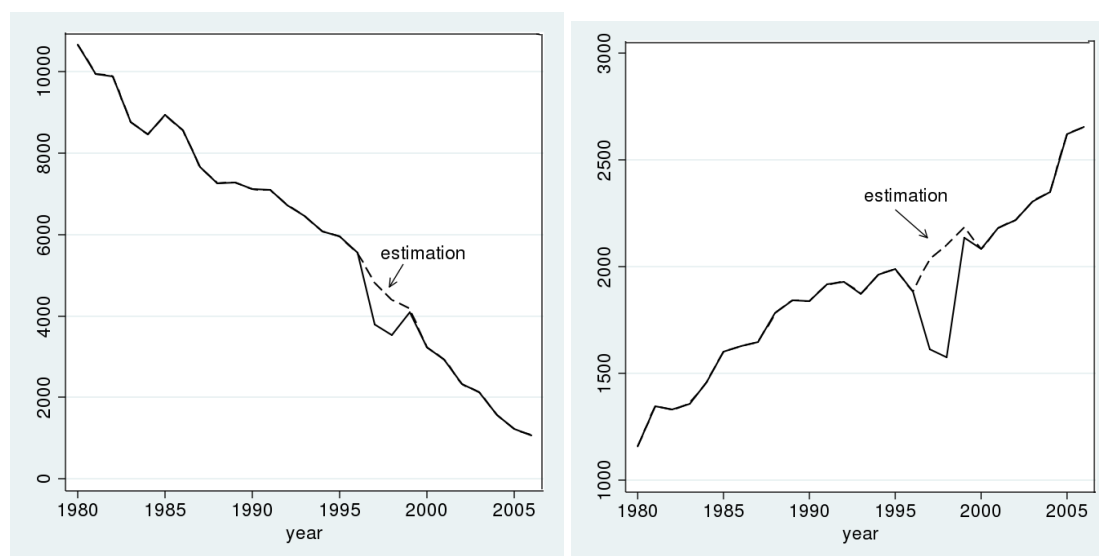


Fig.2a,b. Reconstruction of data lacking due to the strike of medical doctors in Poland, mortality due to pulmonary heart diseases (I27), left, and due to chronic renal failure (N18), right

In general, the implementation of WHO ICD-10 revision can be recognized as a profound change in mortality data collecting system, mostly due to increase in number of causes of death, rearrangement of certain chapters and redefinition of violent deaths. The use of WHO list of correspondences between ICD-9 and ICD-10 revision, prepared for the first time for a transition between subsequent ICD revisions, gave unsatisfactory results as for reconstructing Polish cause-of-death mortality series. Therefore, on the basis of WHO ICD-10 guidelines additional correspondences between single causes of deaths have been created. Selected most problematic associations between causes of death will be discussed in the paper.

Key words: mortality, cause of death, WHO ICD, ICD-10, Poland.