



UKE Paper of the Month April 2017

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## Time trends of cause-specific mortality among resettlers in Germany, 1990 through 2009

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### ABSTRACT:

Resettlers (in German: (Spät-)Aussiedler) form one of the biggest migrant groups in Germany. It is known that migrants have different mortality patterns compared to the autochthon population. In this paper, we combined data from three resettler cohorts and examined differences in mortality from non-communicable diseases among resettlers in Germany and the German population. Furthermore, we investigated time trends of cause-specific mortality for 20 years of follow-up and compared it with the German mortality rates. To assess differences in cause-specific mortality between resettlers and the general German population, we calculated standardized mortality ratios (SMRs). To ascertain mortality trends, cause-specific age-standardized mortality rates were calculated and modeled with Poisson regression and fractional polynomials. During the observation period, the study population accumulated almost 800,000 person-years and 5572 deaths were observed. All-cause mortality among resettlers was lower (SMR = 0.91, 95% CI = 0.89-0.94) compared to the general German population, as well as cardiovascular diseases (CVD) mortality (SMR = 0.82, 95% CI = 0.79-0.86). Results for cancer mortality varied considerably by cancer site. Analyses of time trends showed that all-cause and CVD mortality were decreasing over time in resettlers, as well as in the general German population. Lower all-cause mortality among resettlers is mainly explained by lower CVD mortality. Cancer-site specific mortality showed different results. Converging mortality rates may indicate an adaption of lifestyle behavior. However, there are no data on individual risk factors in this study.

### STATEMENT:

*This is the first study which reveals the mortality patterns over time for the largest group of migrants in Germany. Migrant studies have been proven to be very useful in the past to disentangle the effects of genetic, epigenetic and lifestyle factors on chronic diseases. As one reviewer noted: "They find an overall lower mortality in resettlers mainly due to lower CVD mortality...The authors use sound methodology and the study results are very interesting". The results of the paper indicate that different distributions of genetic or epigenetic factors in resettlers may exist.*

### BACKGROUND:

This work was performed at the Institute for Medical Biometry and Epidemiology, in collaboration with other institutes. It is part of the PhD thesis of Valentina Leier. She is supervised by Heiko Becher who holds a professorship at UKE since 2014 and who is director of the institute since 2016. The project is part of the BMBF funded grant "Prädiktoren und Risikofaktoren für relevante chronische Erkrankungen und Inanspruchnahme gesundheitsbezogener Leistungen unter besonderer Berücksichtigung von Aussiedlern". Valentina Leier is a resettler by herself and holds a Master degree in Public Health from the University of Bremen.