

Inequalities in mortality associated with housing conditions in Belgium between 1991 and 2020

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Background and Objectives

Epidemiological research worldwide suggests that inadequate housing is strongly associated with adverse health effects and premature mortality.

We aimed to 1) create a spatial and time-specific composite measure of housing deprivation and 2) to estimate the number of deaths that could be prevented if the population of Belgium had the mortality rates of the least deprived housing deprivation decile.

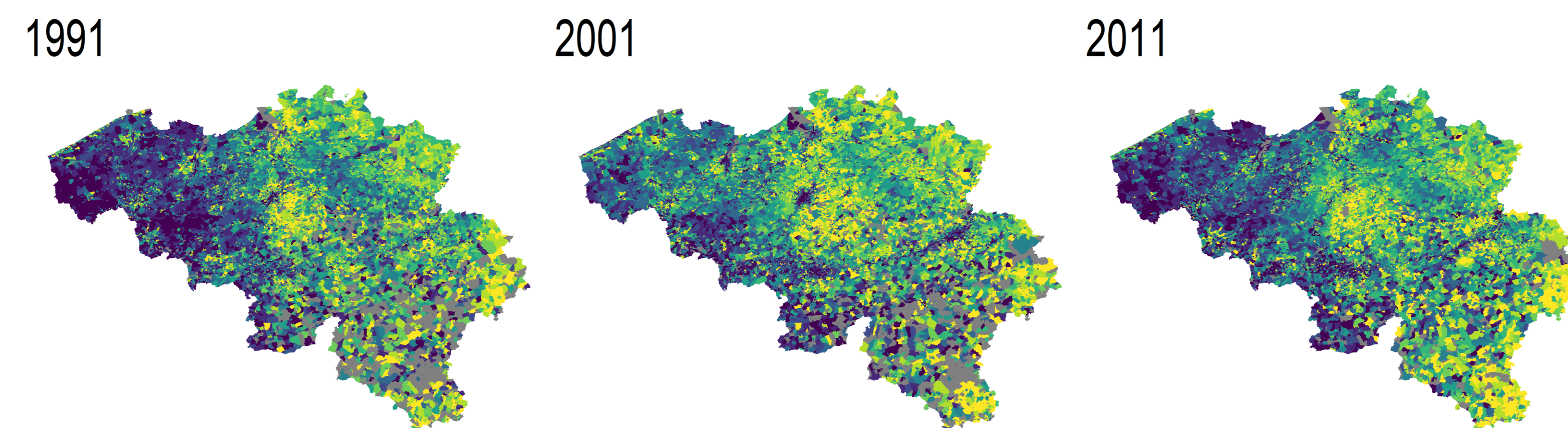
Methods

Data on housing characteristics from the 1991, 2001, and 2011 Belgian population censuses were utilized to develop area-level housing deprivation indices at the level of the smallest geographical unit in Belgium, the statistical sector.

Age- and sex-standardized mortality rates (ASMR), population attributable fraction (PAF), life expectancy (LE), and potential years of life lost to inequality were calculated for each sex, a 5-year age group, deprivation decile, and a 10-year period. The Arriaga method used to decompose differences in life expectancy between the most and least housing deprivation deciles.

Results

- About 19,000 Belgian statistical sectors assigned to deprivation deciles from the most to the least deprived

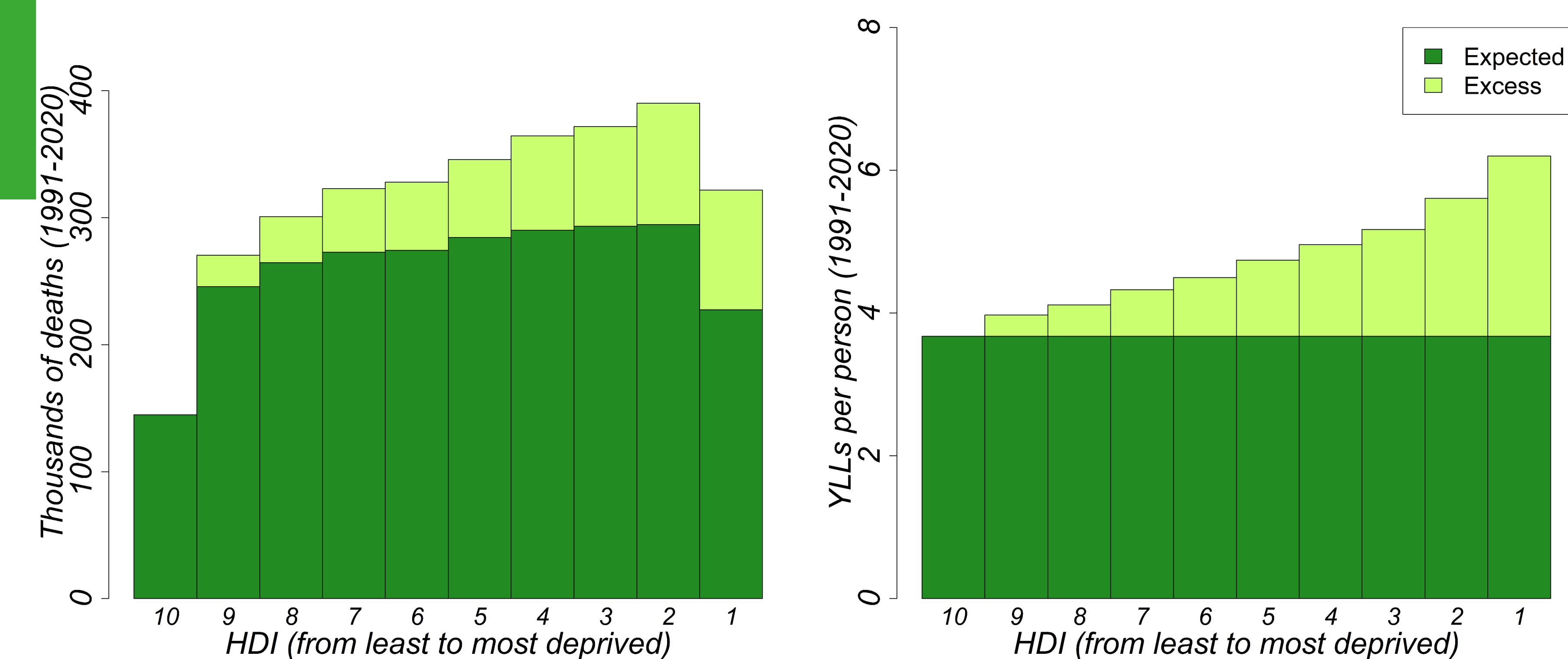


Deciles 1 2 3 4 5 6 7 8 9 10 NA

- ASMR reduction greater for men in most deprived deciles and women in least deprived deciles (-406 and -293 per 100,000 person-years)
- PAF greater for men than women in the most and least deprived deciles, peaking in both sexes at ages 40-49, accounting for more than a half of all deaths occurring in the middle-aged population
- LE greater for men and women in the least deprived deciles, greatest increase in LE for men aged 60-70 and women aged 70-80

Conclusion

18.5% (95% CI 17.7-19.3) of all deaths between 1991 and 2020 were attributable to poor housing, equating to 568,605 deaths, or 1 in 5 deaths



	1991-2000	2001-2010	2011-2020
Age and sex-standardized mortality rates per 100 000 person-years			
Male			
Most deprived	1649	1495	1243
Least deprived	1193	923	826
Difference	456	572	417
Female			
Most deprived	1402	1271	1140
Least deprived	1156	1027	863
Difference	246	244	277
Mortality attributable to housing inequality (PAF %)			
Male	21.0	26.5	19.4
Female	12.6	11.3	15.5
Mean number of PYLLs attributable to inequality			
Male	1.5	1.6	0.9
Female	0.6	0.7	0.5
Life expectancy at birth			
Most deprived	76.3	77.3	79.8
Least deprived	80.4	82.8	83.9

