

# Change of socioeconomic inequalities in length of stay in hospital with increasing age: cumulative (dis)advantage or age-as-leveler?

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Research on socioeconomic inequalities in health from the life-course perspective raises an important question on how the inequalities change in late life. Mixed evidence of a further divergence (cumulative advantage/disadvantage) and a convergence (age-as-leveler) has been reported. Length of stay (LOS) in hospital is inversely associated with socioeconomic position, but it is less clear how the socioeconomic disparities change with increasing age. We use data from a linked register-based 11% random sample of the population permanently residing in Finland at the end of any year between 1987 and 2007, obtained from the longitudinal population data file of the Statistics Finland. The sample is restricted to 63,244 men and 86,364 women aged 50 and older in the end of 1987. Annual total days of stay in hospital in 1988-2007 were calculated based on the Hospital Discharge Records. The highest educational attainment, household income, and occupational class are extracted from the Labor Market Data File. The LOS trajectories over 1988-2007 are estimated using a latent growth curve negative binomial model with two growth parameters: the LOS in 1988 and the annual rate of change. The growth curves and survival are further estimated jointly using the pattern-mixture model. LOS increased over time. Compared to Finns with basic education, those with beyond basic education have lower LOS in 1988 (incidence rate ratio [IRR]: 0.79, 95% confidence interval [CI]: 0.75 to 0.83) but a marginally faster rate of increase in LOS (IRR: 1.01, 95% CI: 1.00 to 1.01). For occupational class, the LOS in 1988 are higher in the lower white collar, manual, self-employed and other groups than the upper white collar group; while the slope did not differ. These results are preliminary. More analyses will be performed on income and LOS trajectories, and by age groups and sex separately.

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