

Geographies of Mortality Inequality

Friday, October 24, 2025 9:10 AM (20 minutes)

Abstract: Physical environment has received increasing attention for its potential influence on mortality rates, but the complex role of urban sprawl remains insufficiently understood. Using county-level data for the contiguous United States, we examine a multidimensional set of urban sprawl indicators alongside natural environmental factors as correlates of mortality. We also explore the mediating role of intergenerational mobility (IM), and account for spatial heterogeneity in these relationships. Overall, most sprawl indices are associated with higher mortality risks, include population sprawl, employment mixed layout, land mixed use, and transportation accessibility. In contrast, other sprawl indicators, such as reduced population density and more urban areas, are linked to lower mortality risks. Natural environment factors align with expectations: air pollution relates to higher mortality risks, whereas green space coverage mitigates them. In terms of relative importance, poverty, obesity, and air pollution emerge as the strongest predictors of mortality, and most sprawl indicators and natural environmental factors show threshold effects and play significant roles in certain stages. Indirectly, population clustering, employment mixed layout, land mixed use, and high transportation accessibility relates to lower mortality risks by enhancing IM, whereas employment clustering, high population density, and urban areas are associated with higher mortality risks through reducing IM. Spatial heterogeneity further underscores the varying effects of influencing factors. These findings highlight the intricate and diverse impact of urban sprawl on mortality risks, pointing to the need for targeted and context-sensitive policy approaches.

Keywords: Urban sprawl; Natural environment; Intergeneration mobility; Mortality inequality

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October 24, 2025

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Afternoon

Organized Session Details

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