Determinants of Home Death in Cancer Patients, a Population-Based Study in Ontario, Canada

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Abstract

Background: In developed countries, the majority of cancer deaths occur in institutions, while most patients would prefer to die at home. The goal of this study is to assess the association between death at home and patients' neighbourhood income and rural-urban residence.

Materials and methods: This is a retrospective cohort study of Ontario cancer decedents using linked administrative health data. Adults who died of cancer between 2003 and 2010 were included. A multivariable logistic regression model was used to evaluate factors associated with home death including age, sex, cancer type, region of patients' residence, neighbourhood income quintile for urban areas, rurality, comorbidity and year of death.

Results: 193,783 deaths were analysed, 9.1% of which occurred at home. In urban areas, patients living in richer neighbourhoods were significantly more likely to die at home (OR 1.55, 95% CI 1.49-1.60, for highest neighbourhood income quintile compared to lowest). Odds of home death for patients residing in a rural area was not significantly different from residents of lowest income urban neighbourhoods (OR 1.02 CI 0.98-1.06). Other variables associated with lower odds of home death were: higher age, higher comorbidity index, living in certain regions, and hematologic cancers.

Conclusion: The likelihood of dying at home for cancer patients significantly decreases with living in lower-income neighbourhoods or with rural residence. These findings underline the importance of targeting these populations for public support at the end of life.