


Places of Cancer Death in Germany

To the Editor:

Although most people wish to die at home, relatively few actually do so. There are limited data about place of death in populations with cancer and the factors that influence it. We analyzed 1505 cancer deaths in the last five years in a rural district in Eastern Germany. Data fields included these variables: place of dying (categories: hospital, home, nursing home), gender, age, diagnoses following ICD-10 (categories: breast cancer, colorectal cancer, lung cancer, hemoblastoses, other tumors) and place of residence (town, village). Statistical examination of hypotheses about overproportional combinations of explanatory variables were done in a fitted log-linear model and Poisson-distributed residuals. The final log-linear model results from stepwise comparison of some competing models using Akaike information. It contains all six variables that are significant and all interactions at the second order. Statistical significance was seen for the combinations:

- Countryside living — dying at home ($P < 0.001$)
- Male — lung cancer ($P < 0.001$)
- Age 51 to 60, 61 to 70 years — dying in hospital ($P < 0.0017; 0.002$)
- Age > 80 years — dying at home ($P < 0.01$)
- Breast carcinoma — dying at home ($P < 0.05$)
- Age 61-70 years, lung cancer, dying home ($P < 0.029$)

There were only a few useful predicting parameters for the place of dying. Older people and people from the countryside prefer to die at home. Especially in the countryside, there may be intact families so that children and partners can care for their loved ones. Also interesting is the combination between age group 61-70 years and dying at home. Most patients with lung cancers are treated in regional specialized clinics for pneumonology, and are usually discharged home after finishing tumor-specific therapy. For those patients, there is no specific connection to the local hospitals, so that admissions to those are not done by general practitioners. Patients with breast carcinoma are usually treated in local hospitals, and are admitted to the hospital in the terminal phase.

Most people wish to die at home. The percentage of people actually dying at home is much lower and ranges from about 20 % in big cities like Berlin with many single households, to about 45-50% in the countryside. The proportion of patients dying at home can be increased significantly by home care services. Data from Berlin, from the region reported herein, and, interestingly, from Taiwan show that competent and engaged home care can increase the percentage of dying at home to 65-70%. With a qualified palliative care team, 67% of our cancer patients could die at home. These data raise the question for home care providers: how could the number of patients who die at home be increased, and which groups of patients are important.

Relatively little work has been done on the distribution of dying cancer patients. Gatrell and coworkers describe that patients from deprived areas were more likely to die in a hospital or hospice; the probability of death at home decreased among those living in deprived areas. Interestingly, these patients were mainly male and had a cancer of the respiratory system, similar to the data presented herein. A group from the M. D. Anderson Cancer Center described more hospital deaths among hematologic cancers, African-American race, and lower socioeconomic status. Hunt and coworkers found that deaths in public hospitals mostly comprised younger people, males, those born outside Australia and residents of lower socioeconomic areas. Patients who died at home were longer-term survivors and tended to be under
70 years of age. The Irish group from Tiernan\(^9\) compared preferred versus actual places of death among patients referred to a palliative care home care service. Over 80% expressed a preference to die at home; almost 50% of those who expressed a preference to die at home actually died there. Uncontrolled symptoms and inability of the family to cope were the main reasons precipitating admission. The leading role of social status also has been described by Weitzen and colleagues,\(^10\) who analyzed data from the National Mortality Followback Survey. They found that nearly 60% of deaths occurred in hospitals and approximately 20% of deaths occurred at home or in nursing homes. Deceaseds who were black and less educated were more likely to die in hospital. Amir et al.\(^11\) also described the influence of social status: The proportion of deaths at home was higher among patients from the upper socioeconomic profile and death in hospital was proportionally more frequent among patients with lower status. Wilson and coworkers\(^12\) analyzed the locations of death in 20th century Canada and found two key influences: 1) health care and health system developments and 2) reduced availability of home-based caregivers.

Location of death is an important focal point for studying and planning improvements in end-of-life care. A Swedish research group found that a preference for dying at home and not living alone are the strongest predictors of home death;\(^13\) the understanding of impending death was significantly more common among the families of those dying at home.

In Nova Scotia, Burge and coworkers\(^14\) analyzed the places of death of cancer patients from 1992 to 1997 and found that women, elderly people and people with longer survival after diagnosis tended to die outside the hospital. The same results were reported by Higginson et al.\(^15\) in London, UK. The latter group analyzed ten-year trends in the place of dying of 1.3 million cancer patients in England from 1985-1994 and found a trend towards a reduced hospital and home death rate but an increasing death rate in nursing homes and hospices. Older people and women were less likely to die at home than younger people and men. Patients with cancers of the lung were also more likely to die at home.

Our data, therefore, agree with the literature. In the future, it will be important to focus on home care availability for all patients, especially for patients from the countryside, because here the chance for dying at home is higher than in the cities. This fact is even more important because about 67% of the people in the investigated area live in the countryside.\(^16\)

For the care of patients in the city, the education of general practitioners in palliative care is more important. Tiernan and co-workers\(^9\) suggest that facilitating choice in the final phase should be acknowledged government policy and, as such, greater resources should be made available to community health and social services to support ongoing care at home.\(^9\) This will be challenging at a time of reduced financial resources in the German health care system. Nonetheless, we have to improve medical education for general practitioners in palliative care and more resources should be made available to support care at home. The German Federal Chamber of Physicians has prepared the way by including the special qualification of palliative medicine into vocational training regulations.

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References


