



Service Priorities and Programmes
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Appropriate infection control measures should be strengthened in nursing homes since nursing home residence is an independent risk factor for infection related mortality in older adults

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Introduction

Nursing home older adults contribute 8% of the population aged 65 years or older. The mortality rate of nursing home older adults is higher than that of community dwelling older adults and it is largely attributed to their advanced age, more comorbidities and frailty. However, whether nursing home residence is an independent risk factor for mortality is controversial.

Objectives

To investigate whether residence in nursing home is an independent predictor for mortality for older adults

Methodology

It was an eight-year retrospective cohort study performed in Fung Yiu King Hospital (FYKH). Residence status upon discharge from geriatric day hospital (GDH) of FYKH was recorded. Other measurement included [A]Medical status using Charlson comorbidity index, serum haemoglobin level and glomerular filtration rate; [B]Functional status using functional independence measure; [C]Cognitive status using mini mental state examination; [D]Nutritional status using body mass index and serum albumin level. [E]Number of non-scheduled hospitalization in the preceding year. Outcomes were one-year all cause mortality, infection-related mortality, pneumonia-related mortality and cardiovascular-related mortality

Result

1737 patients (1063 lived at home and 674 lived in nursing home) were included. At one-year follow up, nursing home older adults had higher all cause mortality (12.6% vs 5.1%, $p<0.001$), infection-related mortality (7.1% vs 2.4%, $p<0.001$), pneumonia-related mortality (5.0% vs 1.6%, $p<0.001$) and cardiovascular related mortality (3.7% vs 1.9%, $p=0.015$) than older adults living at home. After multivariate analysis, nursing home residence was independent predictor for all cause mortality

(Hazard ratio [HR] 1.60, 95% confidence interval [CI]: 1.08-2.36; $p=0.019$) and infection-related mortality (HR 1.88, CI: 1.10-3.22; $p=0.021$). In conclusion, nursing home residence is an independent risk factor for all cause mortality and infection-related mortality in older adults. Nursing home older adults are susceptible to infection because of the institutional environment within which older adults socialize and live. The crowded living environment, shared physical therapy activities, shared bathing facilities and group dining facilities have the potential to foster person-to-person transmission of infectious agents. Vaccination and appropriate infection control measures are important modifiable factor that should be strengthened to reduce infection and associated mortality.