

LONG-TERM EFFECTS OF HOMELESSNESS ON MORTALITY: A 15-YEAR AUSTRALIAN COHORT STUDY.

Ramon Jose Seastres¹, J Hutton^{1,2}, R Zordan^{1,3}, V Sundararajan¹, K Kiburg¹, J Mackelprang-Carter⁴, G Moore¹

¹University of Melbourne, Melbourne, Australia.

²Emergency Department, St Vincent's Hospital Melbourne, Australia

³St Vincent's Emergency Practice Innovation Centre, Melbourne, Australia

⁴Department of Psychological Medicine. Swinburne University of Technology, Melbourne, Australia.

Introduction: Homeless people have high rates of substance use, medical and psychiatric comorbidities, and are frequent attenders to emergency departments. This study examined the effect of homelessness on mortality in emergency department attendees.

Methods: A retrospective cohort study in an inner-city public hospital from 2003-2017. Adult ED attendees between 01/01/2003-31/12/2004 with at least one recorded homelessness episode (n=1,575) were categorised as: *primary* (e.g. on the streets), *secondary* (e.g. emergency accommodation), *tertiary* (e.g. single room in private boarding house or *marginally housed* (e.g. public housing requiring rental assistance). Homeless attendees were compared to a randomly-selected non-homeless comparison group (n=4,725). Outcome measures were mortality rate, risk of mortality, and age at death.

Results: Compared to non-homeless attendees, homeless attendees had an increased mortality rate and mortality risk (12 vs 8 per 1000 person-years, rate ratio [RR] 1.47, 95%CI 1.26-1.71) and younger median age at death (67 vs 78 yrs, p<0.001).

A correlation matrix of four variables demonstrated collinearity. These included homelessness, primary psychiatric diagnosis, a primary substance use diagnosis, and being classified as a frequent attender. As such, only homelessness was retained in the model. Homelessness was an independent risk factor for death (hazard rate [HR] 1.76, 95%CI 1.49-2.08, p<0.001). *Primary* (HR 2.05, 95%CI 1.67-2.50, p<0.001), *secondary* (HR 1.60, 95%CI 1.23-2.10, p<0.005), and *tertiary* (HR 1.72, 95%CI 1.16-2.56, p<0.01) homelessness were independent risk factors for death.

Conclusion: One recorded episode of homelessness was associated with increased mortality risk and younger age at death, in all levels of homelessness except in the *marginally housed* group. Provision of public housing for people experiencing homelessness may reduce mortality.

Disclosure of Interest Statement: This work was made possible by a St Vincent's Hospital Inclusive Health Research Endowment Fund Grant. No pharmaceutical grants were received to enable this study.