

# BEHAVIOURAL ADAPTATION OF OLDER PERSONS DURING EXTREME HEAT IN TWO AUSTRALIAN STATES

*Alana Hansen, University of Adelaide, Australia*

*Peng Bi, University of Adelaide, Australia*

*Monika Nitschke, South Australian Department of Health, Australia*

*Dino Pisaniello, University of Adelaide, Australia*

*Jonathan Newbury, University of South Australia and University of Adelaide, Australia*

*Alison Kitson, University of Adelaide, Australia*

*Eleonora Dal Grande, University of Adelaide, Australia*

*Jodie Avery, University of Adelaide, Australia*

*Graeme Tucker, South Australian Department of Health, Australia*

**Background and Aims:** Heatwaves regularly occur during summers in southern Australia, and the health impacts are often more marked in the older population. With established physiological links between age and heat-susceptibility, it is important that barriers to behavioural adaptation be identified so that evidenced-based prevention strategies can be formulated accordingly. The aim of this study was to investigate factors affecting the heat-adaptive behaviours of older persons in two Australian states.

**Methods:** Computer assisted telephone interviews were conducted late in the 2010-2011 summer with a total of 500 older persons in each of two Australian states, South Australia and Victoria. The study population consisted of persons aged 65 years and over residing in the community, and calls were made to listed residential telephone numbers until a person of the target age was found. The survey instrument was informed by a literature review and a prior qualitative study. Questions covered issues such as air conditioner usage, fluid consumption, resilience, risk perception, behaviour change, and knowledge of heat-health messages. Spatial and quantitative analyses of data were performed using logistic regression in multivariate models.

**Results:** Whilst an unprecedented heatwave occurred in southern Australia in 2009 claiming hundreds of lives, this study was undertaken during a mild summer in which only one short but intense heatwave occurred, and other natural weather disasters (i.e. floods and cyclones) captured the attention of Australians. Nevertheless, the findings have provided valuable insight into the adaptive behaviours and risk perceptions of older persons during extreme heat in two major Australian cities (Adelaide, SA and Melbourne, Vic) and rural areas in the respective states.

**Conclusions:** This comprehensive study of the heat-adaptive capacity of older persons may provide an evidence base for interventions and influence the formulation of future age-appropriate health promotion and risk communication strategies for heatwave warnings.