

# Climate Change Adaptation Research Grants Program

## - Social, Economic and Institutional Dimensions Projects

### **Project title:**

Heat-Ready: Adapting Aged Care Facilities to prevent premature death in elderly Australians.

**Principal investigators:** Professor Deborah Black  
**Lead organisation:** The University of Sydney

### **Objectives:**

To identify

- current policies, procedures, strategies, knowledge and environmental factors (such as building design and cooling equipment), used in Aged Care Facilities (ACFs) in three Australian states, which may be adapted to prevent premature death from extreme heat in elderly ACF residents.
- the capacity of aged care facilities to adapt to increasing periods of extreme heat and
- to provide strong research evidence on which policy and guidelines can be developed and implemented.

### **Project design and methods:**

#### ***Project Design:***

This is a cross-sectional, mixed methods study comprised of two distinct phases.

- **Phase I** focuses on the engagement of Aged Care Facilities (ACFs) in NSW, Qld and SA and the collection of quantitative and qualitative data from 500 ACFs in each state.
- **Phase II** is the analysis and synthesis of findings and the development of recommendations for future collaborative initiatives and policy development across Government and non-Government agencies.

A Steering committee will guide and inform the project at all stages. The steering committee will be made up of the Research Team as well as representatives from the Australian Council of the Ageing (COTA) and Nurses Federation (ANF).

#### ***Methods:***

**Phase I:** Following a review of the literature and assessment of internationally validated tools, the research team will develop a semi-structured questionnaire designed to be administered by telephone to ACF managers and nursing staff. The questionnaire addresses the research objectives and will collect data on facility demographics, size, location, service type (high care or independent living), building type, cooling equipment used, heat-wave plans or guidelines, care strategies used in the heat and heat-health knowledge score. The questionnaire will be piloted in 6 ACFs to ensure validation, prior to widespread data collection.

In collaboration with the Department of Health and Ageing and the COTA, ACFs in NSW, Qld and SA will be identified. Each state's aged care providers (Anglicare, Catholic Healthcare, Baptist Health etc) will be sent an information package and invited to participate in the study by the project officer. Following provider consent approximately 1000 ACFs in each state will be then invited to participate. The project officer and early career researchers on the research team (LW (NSW) and AH (SA)) will schedule interviews with the ACF staff at a time to suit them. Each individual interview will take no longer than 15 minutes and will be recorded electronically into a custom designed database

#### ***Sample size:***

Assuming a 50% response rate from the 1000 invited ACFs in each state we aim to enrol 500 ACFs in each state into the study (Total = 1500). Each participating ACF will be asked to nominate a nursing staff member and an administrative staff member to respond to the questionnaire. This will result in approximately 3000 responses across three states.

***Data analysis:***

ACFs will be analysed separately in the three clusters (based on state) and using multi-level analyses based on size, location (metropolitan or rural) and type, categorical variables will be analysed separately for each strata and by respondent type (managerial or administrative). For the combined data, inter-respondent correlation analysis will also be conducted. Multi-level analysis will be used to ascertain whether there are any predictors of heat-health knowledge or current-heat health plans. Barriers to adaptation will be analysed by stratified sample and location to identify any local issues which may impact on the ACF. Free text responses will be coded and categorised into themes, and analysed using NVivo software.

**Phase II:** Based on the results of the semi-structured interview, data analysis and synthesis the research team and steering group will work collaboratively to identify key findings relevant to end-users including government organisations and service providers.