



School of Public Health PhD Student Project

TITLE: Heat events and health burden in the tropics under the global warming

FIELD OF RESEARCH: Epidemiology

SUPERVISOR/CONTACT NAME: Nick Osborne

SUPERVISOR/CONTACT EMAIL: n.osborne@uq.edu.au

LINK TO UQ RESEARCHERS PAGE: <https://researchers.uq.edu.au/researcher/23923>

PREREQUISITE SKILLS REQUIRED FOR THE PROJECT:

Background in this field with essential experience and prior work experience in environmental data and/or environmental health. Experience working with large health data sets and/or epidemiological studies is highly desirable.

PROJECT SYNOPSIS:

Heat events are one of the direct impacts of climate change impacting public health are increasing at an alarming rate under the global warming. Physiological response to heat events depends not only on temperature, but also on humidity, wind, and radiation, and on the clothing pattern and working condition of the person exposed to heat. Therefore, the mortality and morbidity burden of heat events vary across the tropics depending on the local and socio-demographic conditions. Most current knowledge on heat waves and heat wave warnings are derived from data in temperate zones.

We plan to model heat exchange between human body and the surrounding environment and how that is influenced by climatic factors. This will enable to understand the potential benefits of various intervention. We will examine health and climate data from India and Australia to develop heat mortality model. Further we expect to project the health burden attributable to heat events under various climate change scenarios for the two countries.

A range of questions will be asked around the different heat type in the tropics/subtropics. Smaller diurnal shifts, longer strings of days in the 98th percentile, high night-time temperatures and high humidity have been flagged as potential pathways that the heat-health nexus differs from the temperate zones. These initial studies will use extant data from Bureau of Meteorology and Health Services. This will follow on from conclusions in recent UQ paper Impact of low-intensity heat events on mortality and morbidity in regions with hot, humid summers: a scoping literature review.



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Critical Start/Finish Dates (if applicable):

Link to additional information (if applicable):

<https://ugidar.org/projects/heat-events-and-health-burden-in-the-tropics-under-the-global-warming/>

This is a UQIDAR project with potential to study in both Australia and India

If you are interested in this project, please email the named contact person as listed above