



School of Public Health PhD Student Project

Title: EPIDEMIOLOGY OF CHRONIC KIDNEY DISEASE: SPATIO-TEMPORAL EXAMINATION

Field of Research: Environmental Epidemiology

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Link to UQ Researchers Page: <http://researchers.uq.edu.au/researcher/23923>

Prerequisite skills required for the project: Interest in epidemiology, mapping, nephrology, public health

Project Synopsis:

Chronic kidney disease (CKD) is highly prevalent in UK and Australian populations. It is a complex, multi-factorial disease with environmental and genes plus behaviours contributing to incidence in the community. Evidence that CKD is due to repeated acute kidney injury (AKI) episodes accumulating damage and loss of nephron functionality has built over recent years supported by some evidence, (Chawla, L. S. et al. Acute Kidney Injury and Chronic Kidney Disease as Interconnected Syndromes. N. Engl. J. Med. 371, 58 (2014). presenting a new paradigm to examine this phenomenon. Strong geographic differences in kidney disease incidence have been reported in high income countries but the reason for this phenomenon remains unknown. Kidney is an organ heavily involved in the detoxification of human body to exposures and as such sees a concentration of pollutants and higher intoxication of the organ. Many of these toxin levels are due exposure of humans to environmental chemicals. These vary in concentration across the landscape and the variation may be due to anthropogenic or naturally occurring concentrations (e.g., chemicals related to industry or naturally occurring as in regional water supplies).

Link to additional information:

<https://medicine.uq.edu.au/project/epidemiology-chronic-kidney-disease-spatio-temporal-examination>

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8589686/>

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9298898/>

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8507643/>

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