**Project Title:** The prognostic value of glycemic markers in diabetes and chronic kidney disease: a systematic review and meta-analysis

**Code:** SPH13

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<tr>
<th>Host School / Institute</th>
<th>Sydney School of Public Health</th>
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<tr>
<td><strong>Address:</strong></td>
<td>Centre for Kidney Research, The Children's Hospital at Westmead</td>
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**Certificates & Clearances required:** Yes  *Working with children clearance *Police clearance *

*Information on how to obtain certificates, where necessary, will be given to successful applicants.*

**Primary Supervisor:** [Dr David Tunnicliffe](mailto:david.tunnicliffe@sydney.edu.au)

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**Co-Supervisor/team:** [Prof Allison Tong](mailto:allison.tong@sydney.edu.au), [Dr Martin Howell](mailto:martin.howell@sydney.edu.au), [A/Prof Armando Teixeira-Pinto](mailto:armando.teixeira-pinto@sydney.edu.au), [A/Prof Germaine Wong](mailto:germaine.wong@sydney.edu.au)

**Project Type:** Data Analysis; Clinical; Literature Review

**Project Category:** Public Health; Nephrology/Urology

**Skills / Attributes of a successful student:** Strong interest in research in the areas of: kidney disease, biostatistics and systematic reviews. Able to relate well to others and work independently as part of a team; must have a high level of written and verbal communication skills.

**Project Keywords:** Diabetes mellitus; Prognostic reviews; Chronic kidney disease; Systematic reviews; Glycemic markers

**Project Description:**

Around 40% of patients with diabetes mellitus develop chronic kidney disease, with diabetes mellitus being the leading cause of chronic kidney disease worldwide. Currently, patients with diabetes mellitus are managed according to a glycemic marker, HbA1c, but there are concerns about the utility of this glycemic marker in patients with deteriorating kidney function. Alternatively, other glycemic markers have been identified but the usefulness of these glycemic markers to predict clinical outcomes, such as hypoglycemic events, cardiovascular disease or end-stage kidney disease are unclear.

This project aims to evaluate the prognostic value of glycemic markers in patients with diabetes mellitus and chronic kidney disease. This project will utilise emerging meta-analysis methods to examine and appraise the totality of the available evidence of the utility of biomarkers to predict outcomes in patients with diabetes and chronic kidney disease.

The student will co-author the manuscript for submission to a peer-reviewed journal, and may have the opportunity to present at conferences. The student will gain research skills in literature searching, critical appraisal, statistical analysis, research presentation, and manuscript writing, and knowledge of meta-analysis and statistical methodology.