| **Project Title: Blood pressure targets – how low do patients want to go? A systematic review of patient preferences for increasing treatment burden to achieve small changes in long term risks** | **Code: SPH6** |
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| **Host School / Institute**: Sydney School of Public Health | **Address:** Centre for Kidney Research,The Children's Hospital at Westmead, Westmead, NSW |
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**Certificates & Clearances required:** No

**Primary Supervisor:** Dr Martin Howell

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**Co-Supervisor/team:** This project will be undertaken at the Sydney School of Public Health, Centre for Kidney Research, The Children's Hospital at Westmead. Co-supervisors will include Dr David Tunnicliffe, Professor Allison Tong and A/Prof. Germaine Wong.

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

**Project Category:** Public Health; Cardiovascular

**Skills / Attributes of a successful student:** Strong interest in research in the areas of: chronic disease, kidney disease, patient centred care 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:** Shared decision making; Patient preference; Systematic review; Chronic disease; Patient centred care

**Project Description:** High blood pressure is a major public health issue as it is common and a leading risk factor for cardiovascular disease and chronic kidney disease. There is increasing evidence that treating people with high blood pressure to a low systolic blood pressure target of <120 mm/Hg decreases the risk of cardiovascular outcomes compared to current treatment targets (130 or 140 mm/Hg). People with chronic kidney disease achieve similar cardiovascular benefits, however it is not clear whether a lower target reduces progression to end stage kidney disease (when dialysis or transplantation is needed).

Treating elevated blood pressure relies on lifestyle factors and the use of a range of antihypertensive drugs. In many people, particularly those with comorbidities, multiple drugs are required to achieve the higher target of 140 mm/Hg with more required for lower targets. This represents a substantial treatment burden, increase in drug related side effects, adverse outcomes such as hypotension and higher costs. Furthermore, increasing treatment burden makes it harder for patients to adhere to prescribed regimens which makes it even harder to achieve targets and to affect management of comorbid conditions. Finally, struggling to meet lower blood pressure targets leads to anxiety yet the absolute reduction in risk is actually small.

In promoting low blood pressure targets it has been assumed that patients place a high value on avoiding death, stroke, heart disease and kidney failure and will accept increased treatment burden, and the risks of drug related side effects and adverse outcomes. However, it is well known that patients' values and preferences have a major influence on treatment decisions for a wide range of acute and chronic conditions. In making decisions, patients balance the reduction in risk of adverse outcomes with the burden of treatment by taking into account factors such as their preferences and values, personal circumstances and quality of life. It is therefore reasonable to assume that patient preferences are also relevant to decisions on treatment to lower blood pressure targets in order to achieve a small decrease in the long-term risk of cardiovascular disease.
The aim of this project is to examine the role of patient preferences and values in the balance between treatment burden and reducing the risk of long-term adverse outcomes. The findings will be assessed in the context of changing blood pressure treatment targets.