



## **NEXTGEN-BP: Cuffless wearable blood pressure monitoring to improve patient outcomes** – February 2024



The George Institute  
for Global Health

### **Facts:**

- One-in-three Australians suffer from high blood pressure and only 32% have effectively controlled blood pressure (AIHW 2019).
- Worldwide, the leading risk factor for death is raised blood pressure, accounting for ~30,000 deaths daily.
- The latest research shows that the leading cause of death in Australia is heart disease, followed by dementia and stroke. All three conditions have the common risk factor of high blood pressure.

### **Project Cycle:**

2022 – 2027

### **Partners:**

The George Institute Australia  
UNSW Sydney  
University of Sydney  
University of Tasmania  
The University of Notre Dame  
The University of Western Australia

### **Supporters:**

The George Institute Australia  
Medical Research Future Fund (MRFF)

### **Principal Investigator:**

Professor Alta Schutte

### **Background:**

- Uncontrolled high blood pressure (BP), or hypertension, is the leading cause of death in Australia.
- Only one-third of Australians with hypertension achieve optimal BP control due to treatment inertia – hesitancy among health-care providers to initiate or intensify treatment after high BP readings.
- This hesitancy is due to uncertainty about the reliability of these readings, problematic assessments of clinic BP readings, high variability of BP and a low number of BP measurements taken in primary care.

### **Aims:**

- To assess the efficacy of a remote wearable BP-based care strategy in adults with hypertension to reduce BP in primary care over 12 months, compared to usual care.
- To determine if this remote wearable BP-based care strategy is cost-effective, acceptable to patients and general practitioners (GPs), improves medication adherence and patient engagement, and is safe, compared to usual care.

### **Methods:**

- A device worn on the wrist, which has been approved by the Therapeutic Goods Administration (TGA), takes hundreds of automated BP readings. To review and determine effective treatment, the patient's GP is provided a single number from these readings comprising the percentage of BP readings at target levels during the previous week, accompanied by a treatment decision tool.
- Participants will be randomised to either the intervention wearable wrist monitor or the control in-clinic standard blood pressure monitoring across general practices in Australia.
- All participants will be monitored for 12 months and will attend three mandatory study visits for study data collection. Intervention group participants will also attend two telehealth appointments with their GP.

### **Impact:**

- A novel approach to BP management for those currently living with uncontrolled high BP could save as many as 83,000 lives in Australia, resulting in a \$91.6 billion return.
- A 5-10mmHg reduction in systolic BP demonstrated with this novel intervention would translate to a 10-20% reduction in cardiovascular events globally, potentially saving millions of lives.

### **Contact:**

To find out more about this project and its principal investigators or The George Institute please contact Tina Wall +61 410 411 983 or [twall@georgeinstitute.org.au](mailto:twall@georgeinstitute.org.au)

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