



RACP Foundation Research Awards

FINAL REPORT

Project / Program Title	Can wavelet electrocardiogram analysis predict new heart failure in healthy older Australians?	
Name	A/Prof Ingrid Hopper	
Award Received	2020 RACP/Foundation for High Blood Pressure Research Establishment Fellowship	
Report Date	15/06/2021	
Funding Period	Start Date:	02/09/2019
	Finish Date:	29/03/2024

PROJECT SUMMARY

Associate Professor Ingrid Hopper is a clinical pharmacologist and general physician at Alfred Hospital and at the Monash School of Public Health and Preventive Medicine. She completed her PhD as an NHMRC scholar investigating polypharmacy in heart failure. As a NHMRC early career fellow she was awarded a NHMRC grant to lead the STAREE-HEART study, an ancillary study of the STATins in Reducing Events in the Elderly (STAREE) study, which is Australia's largest currently recruiting double-blind randomised placebo-controlled trial. STAREE-HEART is investigating the impact of statins on the development of heart failure and atrial fibrillation in a healthy, community dwelling population over age 70. This aims to inform population level approaches to the screening and prevention of these conditions.

PROJECT AIMS / OBJECTIVES

Research aims: To assess whether ewECG can identify Stage B Heart Failure in healthy community dwelling older Australians.

This proposal funded the addition of energy waveform electrocardiography (ewECG) to the investigations performed in the NHMRC funded STAREE-HEART study, which is an ancillary study nested in the Statins in Reducing Events in the Elderly (STAREE) double blind randomised placebo-controlled trial. STAREE is investigating whether statins can prolong good health and maintain independence amongst older people and is enrolling men and women 70 years of age and over who are free from cardiovascular disease, diabetes and dementia. To date the STAREE trial has recruited over 8000 Australian participants, with an aim to recruit approximately 10,500 participants. STAREE-HEART is an ancillary study which investigates the impact of statins on incident heart failure and atrial fibrillation, and includes a mechanistic sub-study. So far, STAREE-HEART has enrolled over 110 participants from Melbourne and Perth, and in addition to echocardiogram, 2 week recording of twice daily single lead ECG and biobanking, all have received ewECG. Recruitment was suspended in Melbourne in 2020 as a result of the COVID-19 pandemic, but continued in Perth with only a brief intermission. The STAREE parent trial continues to recruit, which feeds the recruitment of STAREE-HEART. Recruitment will continue into 2022.

SIGNIFICANCE AND OUTCOMES

ewECG is a novel technique that is currently being assessed for the purposes of screening. This is the first time this technique will be assessed in a cohort of healthy older individuals, which is the group most likely to benefit from routine screening for stage B heart failure. This study will advance the screening technique to detect Left Ventricular Diastolic Dysfunction, which can be used at a population level to identify patients who would benefit from formal echocardiographic evaluations to detect stage B heart failure.

PUBLICATIONS / PRESENTATIONS

To date, data collection continues, so no presentations have been made.

ACKNOWLEDGEMENTS

RACP Foundation as a funder will be acknowledged in all presentations and papers.