South Australian Cardiovascular Showcase
SAHMRI Vascular and Heart Health and the South Australian Cardiovascular Research Network are excited to deliver the 2023 SA Cardiovascular Showcase on Friday 17th November. The purpose of the event is to highlight the work of South Australian cardiovascular researchers across all disciplines, identify opportunities for collaboration, and to consider opportunities to strengthen cardiovascular research in our state and reduce the substantial burden of disease amongst South Australians.

The Showcase promises to be an interesting blend of advocacy for South Australian research, as well as plenary and poster sessions covering basic discovery science, clinical health service and public health cardiovascular research. We have tried to be inclusive in our program by making sure we present equitable examples of projects from all health networks, all universities, and all levels of research from early career to significant leaders. We are delighted to welcome esteemed colleagues from interstate and overseas including Professor Chris Semsarian, Professor Rebecca Ritchie, Professor John Cleland and Professor Sally Inglis. We look forward to the opportunity to promote the incredible research being undertaken in South Australia, as well as hearing about world-leading research programs from these global leaders of our field.

We take the opportunity to thank our sponsors who have contributed to making this event possible, including the Heart Foundation, The Hospital Research Foundation, Novartis, Lions Medical Research Foundation, University of Adelaide, University of South Australia, and Flinders University. We are grateful to these partners for their generous support enabling us to showcase and grow cardiovascular research in this state.

As you enjoy this event, we encourage you to engage with new and existing colleagues, begin collaborative discussions, and support the growth and development of cardiovascular research in South Australia. We have achieved great things in our wonderful state, but there is still much to do. By coming together and supporting each other, we can achieve so much more.

Enjoy today. We hope everyone attending has a great educational and networking experience.

Dr Adrian Elliott and Professor Robyn Clark
Co-Chairs, 2023 SA Cardiovascular Showcase
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## Population Health

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Project title: CLINICAL EFFECTIVENESS AND IMPLEMENTATION EVALUATION OF A 4-STEP LARGE SCALE TRANSLATION MODEL COMPARED TO USUAL CARE ON CARDIAC REHABILITATION ATTENDANCE AND COMPLETION IN RURAL AUSTRALIA: THE COUNTRY HEART ATTACK PREVENTION (CHAP) PROJECT

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ABSTRACT

Introduction: Rural areas have poorer cardiovascular (CV) outcomes which highlights the importance of secondary prevention programs in these areas. Cardiac rehabilitation (CR) utilization, however, remains low globally and in rural areas. We aimed to evaluate the clinical, economic and implementation outcomes of a CR model of care in rural Australia.

Methods: Developed through the Model of Large-Scale Knowledge Translation, the CHAP model included: 1. A web-based CR program co-designed with patients and a model allowing patients choices of single or combined modes of delivery by patients (face to face, telephone and web); 2. Integration of CR with primary care through a business model that compensated GPs for clinical assessments of CR patients; 3. A quality improvement program which included a continuous professional development program and tools and measures standardization. Patients (<=18 years) referred to CR in rural areas (CHAP group) due to coronary heart disease (CHD) with or without revascularization procedures, heart failure, atrial fibrillation, arrhythmias management and valve procedures were compared to age, sex and diagnosis-related code-matched patients living in metropolitan areas (non-CHAP) through a prospective cohort study. Primary outcomes were CR attendance/completion and secondary outcomes included CV readmissions, CV deaths, emergency department visits and cost-effectiveness. We used RE-AIM to evaluate the implementation

Results: 1,913 patients in CHAP were matched to 1,913 in non-CHAP (mean age 69.8, SD 11.8 years; 30.2% females). CHD was the main single diagnosis in both CHAP and non-CHAP (28.2%vs 32.1%; p<0.001). Attendance (24.2 vs 23.8%; p=0.802) and completion (77.1 vs 57.5%; p<0.001) were higher in CHAP. The association persisted after adjustment (HR 1.08, 95%CI 1.01-1.15; p=0.016, for attendance and HR 1.15,95%CI 1.06-1.24; p<0.001, for completion). CV readmission (HR 1.06, 95%CI 0.87- 1.30; p= 0.542), CV mortality (HR 1.02, 95%CI 0.95-1.11; p=0.543) and ED visit (HR 1.07, 95%CI 0.96-1.19; 0.216) did not differ between the groups. The aggregate health care cost per attendance was lower in CHAP ($11,315 vs $13,957). The diversion of resources from CR to the COVID pandemic response compromised the implementation of the originally planned automatic referral system and of a full integration of the technology systems leading to low adoption of the web program by the CR staff.

Conclusions: A cost-effective model of care expanding CR delivery options, enabling support from primary care, and improving CR quality increased CR participation in rural Australia. This model received support from the state Department of Health for large-scale implementation and has potential to reduce metro-rural CV health inequalities. Further improvements will require the implementation of an automatic referral system and technology systems integration.