

Underused heart program could reduce hospital readmissions and lower risk of death

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Referring people to a specialized rehabilitation program following a cardiac incident could reduce the chance they will be readmitted to hospital and potentially lower their risk of death, according to new

Flinders University research—but improvements need to be made to ensure patients take part.

Aimed at limiting the psychological and physiological stress associated with [cardiovascular disease](#), cardiac rehabilitation (CR) programs combine support, exercise and education led by [health professionals](#) in a bid to improve patients' overall heart health.

"To our knowledge, this study is the largest and most comprehensive analysis of the clinical outcomes of CR programs, in Australia, to date," says study senior author Professor Robyn Clark from Flinders University's College of Nursing and Health Sciences and the former Director of Southern Adelaide Local Health Network Nursing and Midwifery Research.

"We found that CR programs offer a significant benefit in reducing [hospital admissions](#) and even death, but they aren't being used to their full potential, with very few patients being referred to the program and of those that are, wait times and other barriers mean many are unable to complete the program to its full benefit."

[Published](#) in the journal *Heart, Lung and Circulation*, the study reviewed 84,064 patients who were admitted to South Australian public hospitals between 2016 and 2021 with heart issues including [myocardial infarction](#) ([heart attack](#)), chronic heart disease, irregular heart rate or a pacemaker installation.

A third of eligible participants were then referred to cardiac rehabilitation and of those referred, 36% started the program. Once started, completion rates were high, with almost 78% of patients finishing their program.

"Our analysis showed that compared to undertaking no program at all,

those who completed it were 38% less likely to die or to be readmitted to hospital for a heart related issue within the following 12 months, with similar results found for the 3 years post referral as well," says lead author Dr. Alline Beleigoli, a medical doctor and Senior Research Fellow in Flinders University's College of Nursing and Health Sciences.

"Previous research has shown the benefits of CR, and our study is no exception but what we also highlighted is just how underutilized the program really is," says Dr. Beleigoli.

The review showed patients who were female, older or suffered from other conditions such as cancer, stroke or obesity were less likely to be referred, while depression and long waiting times stopped many patients from starting the program.

However, the authors found delivering the program via telehealth, often to those in regional and remote areas, was strongly associated with higher completion rates.

"Our findings underscore the critical role of cardiac rehabilitation in reducing mortality and cardiovascular re-admissions. By addressing barriers to participation and promoting program completion, we can significantly improve cardiovascular outcomes in South Australia and nationally," says Professor Clark.

"Quality improvement initiatives should focus on promoting CR referral or introducing an automated system, addressing barriers to participation among women, enhancing access to telehealth services, and reducing waiting times in order to increase program completion rates."

More information: Alline Beleigoli et al, Clinical Effectiveness and

Utilisation of Cardiac Rehabilitation After Hospital Discharge: Data Linkage Analysis of 84,064 Eligible Discharged Patients (2016–2021), *Heart, Lung and Circulation* (2024). [DOI: 10.1016/j.hlc.2024.01.018](https://doi.org/10.1016/j.hlc.2024.01.018)

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