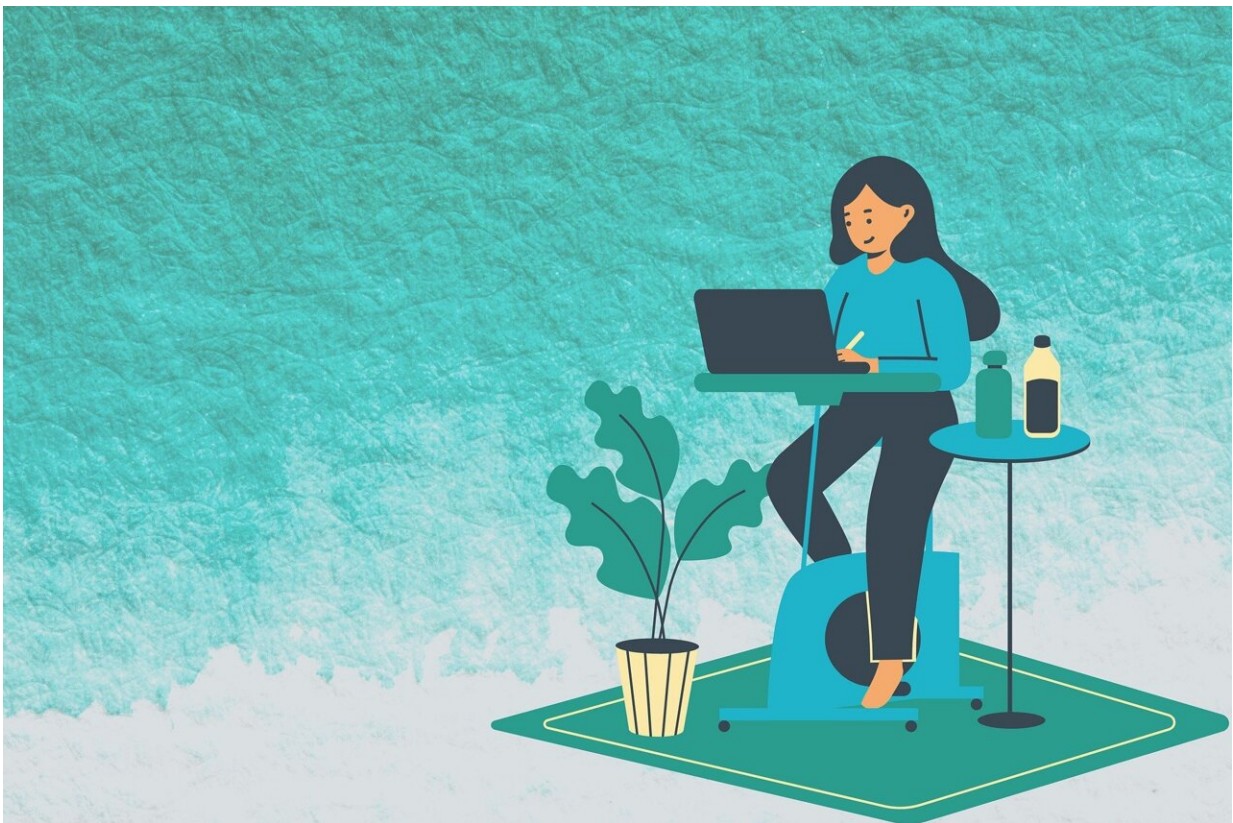


Cardiac patients get moving, thanks to digital innovation

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Credit: Pixabay/CC0 Public Domain

A pioneering digital platform is set to improve outcomes for cardiac patients—allowing them to do supervised rehab exercise programs from their own home, thanks to Deakin University research.

Professor Ralph Maddison and Dr. Jonathan Rawstorn from Deakin's Institute for Physical Activity and Nutrition have developed a [digital platform](#) to enable allied health practitioners to monitor home-based rehab exercise programs.

The Smartphone Cardiac Rehabilitation, Assisted Self-Management (SCRAM) intervention allows clinicians and rehab specialists to receive data electronically to monitor exercise performance and provide personalized coaching. They can monitor a number of people at one time. The concept of remote monitoring, with immediate feedback to clinicians and rehab specialists is pioneering.

"Cardiac rehabilitation saves lives but many people miss out because they can't attend hospital-based programs, and relatively few Australian rehab services offer any alternatives," Dr. Rawstorn said.

"The SCRAM platform is critical to help more people access the life-changing benefits of cardiac rehabilitation. Research shows that those who undertake a cardiac rehab exercise program have 30 percent reduced risk of death from cardiovascular causes and 20 percent reduced risk of being hospitalized but attendance rates are low. Even before COVID, only 20–30 percent of eligible people took part in hospital-based rehab programs.

"Alternatives like the SCRAM platform have become even more important during the pandemic when many hospital programs have been closed, particularly in Victoria and NSW. Many services have launched telephone programs but they can't provide close monitoring or coaching. The SCRAM platform solves those problems."

The easy-to-use SCRAM platform consists of a mobile phone app and a heart rate sensor placed on the patient's chest, which sends data via the Cloud to be monitored in real time by the clinician. SCRAM also

provides lifestyle support / advice through push notifications.

The researchers developed the platform after recognizing that clinicians and cardiac rehab specialists had no independent means of monitoring patients' compliance with post-operative [rehab](#) plans. They knew that compliance has significant benefits for patient recovery and realized that modern technology could provide the answer.

Funded by the National Health and Medical Research Council, the SCRAM [platform](#) is currently being trialed by Western Health and other health services to monitor cardiac patient rehabilitation compliance. It is being trialed in regions including Geelong, Ballarat, Bendigo and overseas in Sweden, and is now being used in trials with Barwon Health and University of Melbourne to help people with cancer before and after receiving treatment.

SCRAM also has potential for remote monitoring of other diseases and post-operative and pre-operative conditions, such as people with diabetes, weight issues, or chronic obstructive pulmonary disease, for instance.

Provided by Deakin University

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