

Mini ECG gets heart attack rehab patients mobile

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Dr Charles Worringham of Queensland University of Technology's Institute of Health and Biomedical Innovation said the unique 'Cardiomobile' monitoring system, developed by Gold Coast company Alive Technologies, was being further developed and trialled together with QUT under an ARC Linkage Grant.

"The program allows people who have been in hospital for a heart attack or heart surgery to undergo a six-week walking exercise rehabilitation program wherever it's convenient, while having their heart signal, location and speed monitored in real time," Dr Worringham said.

"We are trying this approach because 80 per cent of cardiac patients never complete recommended hospital outpatient rehabilitation programs, despite the fact that they cut recurrent heart attacks by 17%, substantially reduce deaths, prevent re-hospitalisation, and improve both function and quality of life."

"It's not because they don't want to take part, it's usually because they cannot get to the hospital's program easily, because there simply isn't one nearby, or because work or family commitments take priority."

Dr Worringham said country singer and songwriter Alan McPherson was one of the first to trial the system.

"Mr McPherson was able to do his rehabilitation sessions while on tour from Queensland to Victoria knowing he was being properly monitored,"

he said.

"Without the system he would have either had to cancel his tour, forego the rehab program, or take a chance and exercise with no monitoring or support."

The Cardiomobile system works by the patient attaching to their chests a mini ECG (electrocardiogram or heart signal) monitor and wearing a cap with a lightweight GPS receiver, both connected to a mobile phone via Bluetooth.

"Patients phone in at the start of their scheduled session and then their heart signal, location, speed and gradient are monitored in real-time over the web by a qualified exercise scientist, who guides the patient's program and checks their progress," Dr Worringham said.

"If there is any problem with the heart signal we can immediately contact the patient, and consult with the cardiologist if needed.

"Although serious problems in cardiac rehab are very rare, if there is an emergency we can direct the paramedics to the exact location without delay. While this approach is different from a hospital-based program, we are talking about a group of patients who either wouldn't exercise at all or would have to go it alone - something many lack the confidence for after heart attacks and surgery."

"If this approach works, it could go a long way towards assisting the recovery of heart patients not reached by conventional rehabilitation, and help to cut the number of avoidable re-admissions to hospital," Dr Worringham said.

Source: Queensland University of Technology

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