

Single test could rule out heart attack in Indigenous Australians

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QUT researchers have identified a way of more quickly determining the risk of a heart attack for Indigenous patients, which could fast-track their treatment and ease hospital overcrowding.

Results from a single test could be used to safely rule out heart attack for up to one third of Aboriginal and Torres Strait Islander patients with low troponin levels according to QUT research.

Published today in the *Medical Journal of Australia*, QUT Associate Professor Jaimi Greenslade from Australian Center for Health Services Innovation (AusHSI) evaluated data from 110 patients who presented with [chest pain](#) to the Cairns Hospital emergency department.

Professor Greenslade said the current process to identify heart attack was to test for levels of troponin, a protein released from damaged heart muscles into the [blood stream](#), at the time of patient presentation and again 2–3 hours later.

"There is a growing body of evidence reporting that a single test may be adequate to rule out heart attack for a group of non-Indigenous patients, but limited research has evaluated the use of a single test for Indigenous patients," said Professor Greenslade, who is also an Advance Queensland Fellow at Royal Brisbane and Women's Hospital.

"Our study provides the first evidence that using a single test is likely to be as safe for Indigenous patients as non-Indigenous patients.

"We found that of the patients who had very low troponin levels on presentation, none ended up having a heart attack within 30 days."

Professor Greenslade said the baseline risk of heart attack was higher for Indigenous patients than non-Indigenous patients, so researchers needed to be sure that processes used to rule out heart attack were safe for this cohort.

"The traditional process used to assess for heart attack ends up being quite lengthy and there are large numbers of patients presenting to

emergency departments with chest pain every year, contributing to overcrowding.

"A considerable amount of research has looked at whether there is a way to expedite this process. One finding was that patients with extremely low results on the first blood test were unlikely to have heart attack and might not need the second test or further testing.

"Until now, it hasn't been clear whether a low initial test result in an Indigenous patient was enough to rule out heart attack like it is in the non-Indigenous patient.

"The implications are that a group of Indigenous patients might also be able to be discharged earlier and may not require long hospital stays."

The study also reported that a large proportion of participants reported [risk factors](#) for [cardiovascular disease](#)—66% were smokers, 40% had diabetes, 56% had hypertension, and 57% had a family history of coronary artery disease.

"A low troponin value may safely exclude [heart attack](#), but Aboriginal and Torres Strait Islander people may benefit from referral to culturally appropriate medical services for cardiac risk factor management," Professor Greenslade said.

Professor Greenslade said the observational study was small, and further research on larger cohorts across multiple sites was needed to identify whether findings could be supported when implemented in clinical practice.

More information: Jaimi H Greenslade et al, Value of single troponin values in the emergency department for excluding acute myocardial infarction in Aboriginal and Torres Strait Islander people, *Medical*

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