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Introducing the Western Australian Cardiovascular Research Alliance (WACRA) – Why?, Why Now? And How Can Government Help?



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To the Editor,

In Western Australia, the local cardiovascular research community has joined forces to create WACRA (Western Australian Cardiovascular Research Alliance) with the aim of working closely with the state government to find solutions to concerning trends in cardiovascular disease and the unique challenges of delivering health care across such a vast, isolated territory.

Cardiovascular disease is a global looming health crisis. Although we have seen a decline in mortality from cardiovascular disease over the last 50 years, there are signs that the decline is abating and may even be reversing [1]. Many factors are conspiring to increase the burden. Childhood obesity is shaping up to be one of its biggest contributors because it is estimated, now, that 100 million children worldwide are obese [2]. Obese individuals are at higher risk of a myriad of cardiovascular health problems, and obesity has also contributed to the mortality associated with COVID-19 infection. A meta-analysis of 75 studies found obese individuals are 46% more likely to become infected with COVID-19 and 48% more likely to die [3]. One year on, half of the patients infected with COVID-19 who had raised troponin levels have persisting myocardial injury on magnetic resonance imaging [4]. COVID-19 infection has presented researchers and the health care sector with a new cohort of unknown biology.

Western Australia (WA) has a set of unique challenges when it comes to delivering health care across such a vast, isolated territory. It is the largest state in Australia, with an area of 2.65 million km², larger than Texas and Alaska combined. Three-quarters of the state's population reside in

Perth, the capital city, and large distances pose challenges for delivery of health care to regional towns. The state's economy relies on mining, petroleum and agricultural exports largely serviced from remote and rural regions. The majority of the state's Indigenous population (approximately 75,000 equating to 12% of Australia's total Indigenous population) are in remote communities where they are six times more likely to develop diabetes and three times more likely to suffer a myocardial infarction than non-Indigenous people [5].

In the state of WA, by far the largest state by area in the Australian federation, the cardiovascular research community believes that the solution to managing this looming crisis needs a visionary, multi-disciplinary approach involving researchers, clinicians, public health advocates and government to tackle it effectively.

The economic benefits of investing in medical research in Australia are undisputed and cardiovascular disease research provides the highest return on research investment—an estimated AUD\$9.80 for every dollar invested [6].

Investment by the WA Government will have a multiplier effect because it will allow WA researchers to leverage further funding from established federal bodies such as the National Health and Medical Research Council of Australia (NHMRC), and the Medical Research Future Fund (MRFF) that has approved funding over 10 years for the Cardiovascular Mission following lobbying by the national collective, the Australian Cardiovascular Alliance.

For example, in other Australian states, the Victorian State Government's AUD\$620m investment in Science, Technology and Innovation (2000–2007) has leveraged AUD\$1.2b in investment and grant funding, and recently, the Office of Health and Medical Research in New South Wales (NSW),

through the NSW Cardiovascular Research Network, invested AUD\$150 million over 10 years in the form of investigator grants and fellowships for cardiovascular researchers across the academic, clinical and technology sectors.

Like NSW and Victorian researchers, WACRA researchers are calling on the WA government to establish the first ever, dedicated cardiovascular research health plan in WA. In this way a competitive, basic biomedical and clinician researcher workforce can be built to develop the much-needed pipeline of research discoveries for future translation into improved health, wellbeing and longevity of Western Australians.

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References

- [1] Mensah GA, Wei GS, Sorlie PD, Fine LJ, Rosenberg Y, Kaufmann PG, et al. Decline in cardiovascular mortality: possible causes and implications. *Circ Res.* 2017;120:366–80.
- [2] Afshin A, Forouzanfar MH, Reitsma MB, Sur P, Estep K, Lee A, et al. Health effects of overweight and obesity in 195 countries over 25 years. *N Engl J Med.* 2017;377:13–27.
- [3] Popkin BM, Shufa D, Green WD, Beck MA, Algaith T, Herbst CH, et al. Individuals with obesity and COVID-19: a global perspective on the epidemiology and biological relationships. *Obes Rev.* 2020;21:e13128.
- [4] Kotecha T, Knight DS, Rasvi Y, Kumar K, Vimalasvaran K, Thornton G, et al. Patterns of myocardial injury in recovered troponin-positive COVID-19 patients assessed by cardiovascular magnetic resonance. *Eur Heart J.* 2021;42:1866–78.
- [5] Australian Bureau of Statistics. 2018. National Health Survey: First Results 2017-18.
- [6] Access Economics. Australia's health and medical research workforce. The Australian Society for Medical Research. 2016.