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# Letter to the Editor: CSANZ Consensus Guidelines for Interventional Cardiology Services Delivery During COVID-19 Pandemic in Australia and New Zealand



To the Editor,

We read with interest the publication of an Australian/New Zealand Consensus Statement on Cardiovascular Disease and COVID-19 [1]. This followed the release of the CSANZ Consensus Guidelines for Interventional Cardiology Services during the COVID-19 Pandemic [2]. Both documents correctly refer to select circumstances where fibrinolysis may need to be considered for ST elevation myocardial infarction (STEMI) treatment. However, we are concerned that some cardiac services have interpreted these statements as a rationale to convert to a routine fibrinolysis strategy for all patients with STEMI rather than maintaining a primary percutaneous coronary intervention (PPCI) service, despite extremely low notification rates of COVID-19 infection of 3.4/100,000 population [3], and this in the context of a high case ascertainment [4]. Indeed, more recently, the CSANZ Consensus Statement on Rural and Remote Cardiology during COVID-19 Pandemic [5], referred to a scenario where “fibrinolysis-first models of care for STEMI be considered, including in metropolitan PCI centres” and highlighted the implications this may have on perceived or real availability of European imported tenecteplase and local stock shortages. Significantly, this has prompted the Agency for Clinical Innovation (ACI) in New South Wales to contact PCI units throughout the state regarding changes in reperfusion strategy and potentially addressing perceived shortages in fibrinolytic drug stores [6].

We strongly believe a routine fibrinolysis strategy should be avoided in Australia and New Zealand for STEMI at this stage, as it would be both deleterious to patient outcomes and counterproductive to rational utilisation of health care resources. There are several reasons for these statements. Firstly, PPCI has long been the preferred reperfusion modality in STEMI given well documented superior clinical outcomes compared to fibrinolysis [7]. Even under current

circumstances, the notion that fibrinolysis is “nearly” as good as PPCI cannot be substantiated given the latter provides higher rates of infarct artery patency, with lower rates of recurrent ischaemia, reinfarction, emergent reintervention and death [7]. Secondly, routine invasive coronary angiography (2–24 hours) is mandated after successful fibrinolysis, hence the requirement for angiography is merely delayed [7]. Thirdly, bleeding, especially intracerebral haemorrhage, is higher with fibrinolysis [7] which is likely to be associated with increased demand for critical care beds. Finally, PPCI shortens hospital length of stay and readmission rates [7].

International recommendations to adopt routine fibrinolysis for STEMI [8,9] have arisen in regions of high COVID-19 prevalence and a context of health systems being overwhelmed. In fact, the most recent Consensus Statement from the Society for Cardiovascular Angiography and Interventions (SCAI), American College of Cardiology (ACC), and the American College of Emergency Physicians (ACEP) emphasises that, even in the current United States COVID-19 context, “primary PCI remains the standard of care for STEMI patients” [10].

Whilst the prevalence of COVID-19 in Australia and New Zealand remains very low, implementation of a widespread strategy of fibrinolysis may accelerate a shortage of hospital beds and resources if instituted prematurely with a deleterious effect on patient outcomes and health care systems. Should an escalating prevalence of COVID-19 infection put increasing pressure on acute cardiac services, the infrastructural challenges of availability of critical care beds and skilled workforce may necessitate a reversion from PPCI to fibrinolysis more widely. Meanwhile, with the remarkable recent gains in “flattening the curve” of new COVID-19 cases in Australia and New Zealand, cardiac services have the opportunity to maximally prepare their workforce in minimising their risk of exposure to COVID-19, including

education and training in personal protective equipment and infection control, whilst continuing to provide local patients with optimal cardiac care.

## Disclosures

There are no conflicts of interest to disclose.

The authors have no competing interests.

There are no relevant funding sources.

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Received 5 May 2020; accepted 13 May 2020; online published-ahead-of-print 6 July 2020

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