Clinical outcomes and health care costs of transferring rural Western Australians for invasive coronary angiography, and a cost-effective alternative care model

In reply: We thank Schultz[1] for her interest in our study[2] and for highlighting that variations in coronary intervention rates exist based on socio-economic and private health insurance status.[3] We agree that variations in coronary intervention rates need therefore be considered in the context of rural patients. Health care in rural Australia faces many challenges, including higher disease burden, limited access to specialist investigations, variation in care delivery and physician shortages compared with metropolitan areas.[4] Indeed, increased remoteness has been correlated with greater coronary artery disease burden and rates of acute coronary syndrome, but not with rates of invasive coronary angiography.[4] Implementing computed tomography coronary angiography (CTCA) in rural centres may be one way to bridge the gap in cardiovascular care. CTCA is a non-invasive diagnostic modality that can identify both obstructive and non-obstructive coronary artery disease and can guide use of preventive therapies, which improves outcomes.[5] Increasing the availability of CTCA in rural centres may lead to more appropriate use of invasive coronary angiography by better identifying those who may require revascularisation and thereby reduce the variations in coronary intervention rates for rural patients.[2]

Currently, rural health care in Western Australia is managed predominantly by public state-based services. Before CTCA can be implemented in rural centres that already use ≥ 64-slice computed tomography scanners, several barriers will need to be addressed, including availability of equipment, trained personnel, expert readers, and cardiology consultations. It is also important that clinical models of care are developed for rural areas, so that appropriate patients are referred for CTCA and that patients are effectively managed by local health care providers both before and after the scan. In an era when digital medicine is increasingly common, investment and allocation of resources into telehealth and centralised cardiology services may be one solution to allow improved access to specialist advice for rural patients. We therefore agree that health system reform is needed to optimise equity of access for rural patients, and this needs to be done in parallel with introduction of new technology, such as CTCA.[1,4] Further research is still required to identify where CTCA can fit into the strategy of reducing inequities to cardiovascular care in rural Australia.

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1 Schultz R. Clinical outcomes and health care costs of transferring rural Western Australians for invasive coronary angiography, and a cost-effective alternative care model [letter]. *Med J Aust* 2024; 220: 107.
2 Alexander M, Lan NSR, Dallo MJ, et al. Clinical outcomes and health care costs of transferring rural Western Australians for invasive coronary angiography, and a cost-effective alternative care model: a retrospective cross-sectional study. *Med J Aust* 2023; 219: 155-161. https://www.mja.com.au/journal/2023/219/4/clinical-outcomes-and-health-care-costs-transferring-rural-western-australians
3 Chew PW, MacIsaac A, Lefkovits J, et al. Variation in coronary angiography rates in Australia: correlations with socio-demographic, health service and disease burden indices. *Med J Aust* 2016; 205: 114-120. https://www.mja.com.au/journal/2016/205/3/variation-coronary-angiography-rates-australia-correlations-socio-demographic
4 Angeles MR, Crosland P, Hensher M. Challenges for Medicare and universal health care in Australia since 2000. *Med J Aust* 2023; 218: 322-329. https://www.mja.com.au/journal/2023/218/7/challenges-medicare-and-universal-health-care-australia-2000
5 Ihdayhid AR, Lan NSR, Figtree GA, et al. Contemporary chest pain evaluation: the Australian case for cardiac CT. *Heart Lung Circ* 2023; 32: 297-306. ■