

Invasive management and late clinical outcomes in contemporary Australian management of acute coronary syndromes: observations from the ACACIA registry

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TO THE EDITOR: The work presented by Chew and colleagues in setting up and using the Acute Coronary Syndrome Prospective Audit (ACACIA) is an important and influential initiative.¹ It has the potential to provide a strong evidence base for the design and delivery of cardiac services in Australia.

Their article and the accompanying editorial by Scott² highlighted the difficulty in determining treatment benefit from uncontrolled observational studies. Among the unreported and possibly significant confounders underpinning the association between acute invasive care and the 47% improved 12-month survival in patients treated for acute coronary syndrome is participation in post-event secondary-prevention cardiac rehabilitation. A contemporary systematic review of randomised controlled trials of cardiac rehabilitation reported a significant relative risk reduction in all-cause mortality of 20% (95% CI, 7%–32%) over a median follow-up of 12 months.³

Despite this evidence and the long-term policy of the World Health Organization that cardiac rehabilitation should be available to all patients with cardiovascular disease,⁴ this secondary-prevention intervention is largely underused, and those who do attend are generally at lower risk of recurrent coronary events than those who do not.⁵ Further, secondary-prevention cardiac-rehabilitation programs are cost-effective relative to other coronary interventions⁶ and, along with proven cardioprotective pharmacotherapy and acute invasive care, should be given priority as part of an optimal treatment and management strategy for secondary prevention.

The completion of cardiac rehabilitation or other forms of secondary prevention by ACACIA patients may have favourably impacted upon the marked improvement in 12-month survival seen in the ACACIA cohort. Chew and colleagues identified the fact that patients who underwent invasive therapies were also more likely to be treated according to best-practice guidelines.¹ It may be that this same group were also more likely to be referred to cardiac-rehabilitation and secondary-prevention programs. It would be of great interest to

know if attendance in cardiac-rehabilitation and secondary-prevention programs was recorded in the ACACIA registry and, if so, why those results were not incorporated.

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1 Chew DP, Amerena JV, Coverdale SG, et al, on behalf of the ACACIA investigators. Invasive management and late clinical outcomes in contemporary Australian management of acute coronary syndromes: observations from the ACACIA registry. *Med J Aust* 2008; 188: 691-697.

2 Scott IA. Acute coronary syndromes: exploring the best way forward in optimising care [editorial]. *Med J Aust* 2008; 188: 686-687.

3 Taylor RS, Brown A, Ebrahim S, et al. Exercise-based rehabilitation for patients with coronary heart disease: systematic review and meta-analysis of randomized controlled trials. *Am J Med* 2004; 116: 682-692.

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6 Briffa TG, Eckermann SD, Griffiths AD, et al. Cost-effectiveness of rehabilitation after an acute coronary event: a randomised controlled trial. *Med J Aust* 2005; 183: 450-455. □

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IN REPLY: It is often hoped that clinical studies can be “all things to all people”. Yet, in reality, clinical registries are optimally designed to answer a limited number of questions such as use of therapies, current treatment, and reassurance (but not proof) of treatment effectiveness.

We decided not to collect data on referral to cardiac rehabilitation in our registry.¹ In arriving at this decision, we were cognisant of the fact that, important to exploring the benefits or confounding effects of therapies is the ability to define the intervention accurately, and then adjust for the baseline differences between patients receiving and not receiving such treatment. This is problematic when considering “referral to cardiac rehabilitation”. How should cardiac rehabilitation (inpatient, outpatient, single-day, multi-day programs)

be defined? Should one assess referral or attendance (partial or complete)?

While the value of rehabilitation is well appreciated, it was not the focus of our study. We are designing future observational studies in this area with more focus on the later phase of patients' admissions and their posthospital management, including rehabilitation.

As we cautioned, the magnitude of benefit associated with invasive management in our study should not be overinterpreted. At best, these studies contribute to the totality of evidence, and offer insights into those patients not currently receiving the benefits of our rich evidence base.

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1 Chew DP, Amerena JV, Coverdale SG, et al, on behalf of the ACACIA investigators. Invasive management and late clinical outcomes in contemporary Australian management of acute coronary syndromes: observations from the ACACIA registry. *Med J Aust* 2008; 188: 691-697. □