More flexible approaches are needed to improve cardiac rehabilitation
Ralph AH Stewart

This issue of the *New Zealand Medical Journal* includes two papers which address the challenges of improving cardiac rehabilitation following an acute coronary event. In a national audit of cardiac rehabilitation services, Kira and colleagues\(^1\) describe large variations in what is provided between District Health Boards, and the lack of standard criteria which would allow reliable evaluation of their performance. In a separate ‘Viewpoint’, Benatar and colleagues\(^2\) describe evidence for the benefits of cardiac rehabilitation, argue strongly for improving its’ delivery, and make suggestions on how this could be done. Both papers conclude that nationally-agreed key performance indicators would provide more reliable information, and would help to focus attention and resources to improve the uptake and delivery of cardiac rehabilitation.

The traditional approach to cardiac rehabilitation addresses multiple aspects of cardiovascular and general health, including disease education and management, exercise training, smoking cessation, dietary advice, weight management, and psycho-social support, during once or twice weekly visits over 6 to 12 weeks. This comprehensive and time intensive approach was first used more than 40 years ago, when morbidity and mortality after myocardial infarction were high, and ‘rehabilitation’ was more obviously needed after a major event, followed by weeks of rest and time off work. Despite evidence for benefit, incremental changes in format and delivery over time, and ‘class 1 recommendations’ in national\(^3\) and international clinical practice guidelines,\(^4,5\) fewer than half of patients internationally attend cardiac rehabilitation,\(^6,7\) and the majority do not complete the program.

Most district health boards provide cardiac rehabilitation, but many services would not meet international standards for a comprehensive program as recommended in clinical practice guidelines.\(^4,5\) This ‘failure’ may reflect a belief that the traditional model of cardiac rehabilitation has adapted too slowly to the enormous changes in the management and outcomes of acute coronary syndromes, so it is now less relevant to the needs of patients. With early reperfusion therapy, invasive angiography and stenting, multiple evidence-based medications, short hospital stays, less disability, and more reliable risk assessment, most patients are quickly able to return to work and other normal activities of daily living. While the consequences of an acute myocardial infarction can be significant, for most the primary focus is no longer ‘rehabilitation’. In contrast, secondary prevention, which includes understanding the need for long-term adherence to medications, regular moderate intensity exercise, a healthy diet and no smoking (which in combination dramatically lower cardiovascular risk\(^8,9\)), are relevant to all patients.

The decision by most patients not to attend or complete a cardiac rehabilitation program should give a strong message. Is it because it does not meet individual needs or is not a priority, or because most patients do not like the idea? Rather than simply trying harder to persuade reluctant patients to engage, it may be better to focus on finding alternative strategies to achieve the same goals, which are more positively received. There is an extraordinarily diversity between cardiac patients in background, social circumstances, economic status, ethnicity, culture, health literacy, health behaviors and psychological well-being, as well as the impact of the cardiac
event, so it is not surprising that a standard approach will not suit all, or even most people. A particular concern is that attendance is often lowest in groups with the highest risk of adverse outcomes, including Māori, Pacific Peoples, other ethnic minorities, and individuals with greater socio-economic disadvantage.

These considerations suggest more flexible, individualised approaches are needed which are also culturally appropriate. As suggested by Benatar, risk assessment could identify patients most likely to benefit from more comprehensive rehabilitation or a supervised exercise program. One approach, which may be more acceptable to patients who currently decline ‘rehabilitation’, is to offer all patients an early follow-up appointment or visit by a cardiac specialist nurse. Assessment would consider cardiac symptoms, medication tolerance and dose adjustment, but also be long enough to identify concerns with return to normal activities, and to consider depression, psycho-social stress, and lifestyle risk factors traditionally addressed during a more comprehensive program. Information and support can be provided, and a plan made on next steps, appropriate to individual choice and circumstances. This could include a decision to participate in a more comprehensive program, a home-based approach such as heart guide aotearoa, referral to culturally appropriate support or a Phase 3 provider. The patient’s general practitioner would be contacted to highlight concerns and to ensure appropriate follow-up. Secondary prevention, which includes the need for long-term adherence to evidence-based medications and a healthy lifestyle, would, in general, be best managed in primary care.

How should performance be assessed in a way which encourages more flexible, personalised and effective approaches? Process indicators such as “Did the patient attend cardiac rehab?” are easy to capture, and could focus attention on the many patients who currently get no ‘rehab’. However, process is not quality, and it is the quality of engagement between the patient and clinical team which is probably most important. Outcome indicators, such as the proportion of patients taking secondary prevention medications at 1 year, or adverse clinical events, better reflect the goals of secondary prevention, and the complementary roles of primary and secondary care, and could encourage novel approaches. Patient-centred outcomes, such as psychosocial well-being and life style risk factors, are also important, but are hard to capture reliably for all patients.

The general principles of cardiac rehabilitation are relevant to other common cardiac conditions, including atrial fibrillation, heart failure and cardiac devices, where medical treatments are often complex, and long-term medication adherence and lifestyle changes important. There are significant challenges, but also large potential benefits to patients and the health system of finding novel approaches which more successfully engage patients in the challenges of living with heart disease.

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