

How can we improve secondary prevention after ACS?

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With more people surviving acute coronary syndrome, the need for sustainable secondary prevention of coronary heart disease is increasing. Secondary prevention starts with guideline-recommended care before discharge from hospital, followed by an effective transition back into primary care and then evidence-based interventions, underpinned by regular clinical review and patient self-management.

KEY POINTS

- Evidence-based lifestyle changes and drug therapies are known to reduce the risk of further cardiovascular events in patients who have survived an acute coronary syndrome.
- Secondary prevention strategies should be implemented before the patient is discharged from hospital and continued by GPs in the community.
- Establishing a strong therapeutic alliance with the patient can help GPs promote a lifelong approach to secondary prevention measures.
- Patient education about coronary heart disease, personalised interventions and strategies such as referral to a cardiac rehabilitation program can improve adherence to secondary prevention measures.
- Increased use of Medicare chronic disease management items might support more systematic care for people living with cardiovascular disease.



Improving secondary prevention in patients who survive an acute coronary syndrome (ACS) is an urgent priority for Australia. The most recent Australian Burden of Disease Study identified cardiovascular disease as responsible for the second highest disease burden (15%) after cancer (19%).¹ Importantly, the large group of people with nonfatal cardiovascular disease – mainly composed of those living with coronary heart disease (CHD) – demands our attention. Population data for Western Australia found that 35% of patients hospitalised for CHD are readmitted within two years.² However, patients with CHD who engage in evidence-based preventive lifestyle and drug therapies are known to reduce their risk of nonfatal and fatal cardiovascular events by 4 to 20% within at least the first year after ACS.³

With more people surviving ACS (the main manifestation of CHD), the need for sustainable secondary prevention is increasing and is a national health priority.⁴ Secondary prevention starts with the provision of guideline-recommended care before discharge from hospital, followed by effective transition back into primary care and then evidence-based intervention, underpinned by regular clinical review and patient self-management.^{5,6} Barriers to preventing new cardiovascular events involve patients, healthcare providers and the health system. Central to delivering a sustainable platform for lifelong prevention of a new myocardial infarction or stroke is establishing a strong therapeutic alliance between the patient and their primary care provider, typically their GP.⁷

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In this article, we provide guidance on secondary prevention from the perspective of both the health system and healthcare providers. This guidance is consistent with recently released guidelines on managing patients with ACS from the National Heart Foundation of Australia and Cardiac Society of Australia and New Zealand and also with the global call to intensify preventive evidence-based treatment.^{6,8}

Components of effective secondary prevention after ACS

Strategies to improve secondary prevention after ACS are summarised in the Box.

Implementation of guideline recommendations before hospital discharge

Before discharge of patients diagnosed with ACS from hospital, the treating team should focus on behavioural and clinical recommendations for secondary prevention. These include:

- encouraging patients to adopt healthy behaviours (e.g. quit smoking, undertake regular physical activity, eat nutritiously from all five food groups daily)
- initiating intensive risk factor management (e.g. lowering blood pressure and cholesterol levels and optimising management of any diabetes mellitus)
- promoting adherence to prescribed cardioprotective medications (e.g. aspirin, another antiplatelet medication, a statin, beta-blockers and ACE inhibitors/angiotensin receptor blockers) by ensuring they are initiated in hospital and listed in the discharge summaries sent to GPs
- actively supporting patients to be managed by their local primary care providers as soon as possible after discharge (this is crucial to facilitate effective transition back into primary care and avoid their loss to follow-up)
- referring patients to effective secondary prevention or rehabilitation services (e.g. general practice or centre-based

rehabilitation programs, telephone coaching or the Heart Manual home program, either singly or in combination)

- providing a chest pain management plan (this is integral to establishing the basis for prevention in patients recovering from ACS and transitioning to long-term self-management of CHD).⁶

Therapeutic alliance between the patient and GP

The patient's GP is the linchpin to implementing, strengthening and sustaining the preventive effort, including self-management. This relies on a collaborative relationship (therapeutic alliance) between patients and their GP, which ideally already exists.

It is imperative that GPs devise a course of action that promotes a lifelong approach to preventing new cardiovascular events. Typically this includes task- and goal-setting, measurement, evaluation and building trust.⁹ For example, setting a target fasting low-density lipoprotein (LDL) cholesterol level of 1.8 mmol/L, repeat measurements of the level and, when necessary, intensification of lipid-lowering therapy as tolerated can help patients lower their LDL cholesterol level. Assessment of smoking status in patients who declared they were quitting at the time of the ACS allows the goal and quit method to be revised in patients who are still smoking. Finding the right balance between support from healthcare professionals and self-management of the underlying CHD is likely to facilitate a more systematic, sustained and collaborative approach to prevention of new cardiovascular events.

Education about CHD from the treating doctor

There is reliable evidence of the treating doctor's influence on a patient's decision to act and adopt preventive measures after a myocardial infarction. For example, a patient's decision to attend cardiac rehabilitation is heavily influenced by whether their doctor directly recommends their attendance.¹⁰ Further, a cigarette smoker

STRATEGIES TO IMPROVE SECONDARY PREVENTION AFTER ACUTE CORONARY SYNDROME

- Before a patient with a diagnosis of acute coronary syndrome is discharged from hospital, the treating team should implement guideline recommendations for secondary prevention.
- Developing a collaborative relationship (therapeutic alliance) with patients can help GPs to promote lifelong secondary prevention.
- Information and education about coronary heart disease from the treating specialist and GP increases the likelihood that patients will adopt preventive measures.
- Individualisation of prevention strategies according to the patient's clinical and personal situation and priorities is essential if they are to be effective and sustained.
- Secondary prevention programs, either hospital-based or delivered in primary care, the local community or the home, can support adherence with lifestyle changes and prescribed therapy.
- Psychological support may be important to help role resumption, with additional provision for social and emotional peer support.
- Use of chronic disease management Medicare items may support more systematic care of patients living with coronary heart disease.

is more likely to quit smoking if told by their doctor to do so.¹¹ It is also important that patients understand that CHD is not 'fixed' by cardiac procedures such as stenting and coronary artery bypass graft surgery or by prescribed medications, but is rather a chronic condition that requires a multifaceted approach, including the adoption of a healthy lifestyle and, in some patients, psychosocial support.

Individualisation of care

Survivors of ACS have different rates of recovery and role resumption, in part because of differences in their disease severity, clinical course, past medical history and lifestyle, beliefs, family support and financial need. Personalising CHD

prevention strategies is therefore imperative if they are to be effective and sustained.¹² GPs are ideally positioned, in collaboration with patients, to implement strategies to lower the risk of new cardiovascular events while facilitating recovery and balancing other personal priorities. Some patients will require reassurance and periodic monitoring, according to best practice, from their GP, whereas those with a complex clinical course and longer in-hospital stay will likely benefit from more intensive interventions, such as comprehensive cardiac rehabilitation programs to progress their physical, mental and social wellbeing. Interventions will likely include goal setting that is specific, achievable and individualised to support personalised behaviour change.

Interventions to support adherence to lifestyle changes and medications

Strategies for GPs to promote adherence of patients to lifestyle changes and medications after ACS include referring them to a cardiac rehabilitation program, establishing a recall and reminder system and use of Medicare chronic disease management items for team-based care.

A wide variety of face-to-face or remote prevention programs improve health outcomes in patients surviving ACS.⁵ Following discharge from hospital, patients with ACS should participate in an effective secondary prevention program according to personal preference, values and the available local resources. Services can be hospital-based or delivered in primary care, the local community or the home. The major components of a quality secondary prevention program include:

- equity and access to services
- assessment and monitoring
- recovery and maintenance
- reinforcement of lifestyle modification and medication adherence
- evaluation and quality improvement.

Psychological support

Psychological support may be important to help patients resume their role after ACS and adhere to secondary prevention

measures. One in three survivors experiences symptoms of depression within 12 months of an acute myocardial infarction.¹³ Depression and social isolation are associated with poor adherence to secondary prevention, which adversely affects prognosis and quality of life.¹³ ACS patients receiving a psychosocial intervention comprising cognitive behavioural therapy and counselling have less depression and better levels of perceived social support, but show no reduction in mortality.¹³ Although there is no evidence that treating depression improves survival after ACS, guidelines recommend that physicians should consider comprehensive evaluation and treatment of severe or persistent depression.¹⁴ GPs can also encourage those who are socially isolated to seek social and emotional peer support.

Use of Medicare chronic disease management items

The MBS includes several item numbers intended to support ongoing management of people with chronic medical conditions.¹⁵ These include the suite of chronic disease management (CDM) items that support the health care of patients who require multidisciplinary team-based care from a GP and at least two other health professionals.¹⁵ Although no specific randomised controlled trial has compared outcomes between patients with and without a CDM plan, the concept is based on a well-developed 'chronic care model' that has been associated with improved health outcomes and lower health care costs.¹⁶⁻¹⁸ It is likely that the implementation of these plans provides a more systematic approach to care that enables primary care providers to provide good quality of care with adequate specialist and ancillary support based on individual patient needs.¹⁹

Additional MBS items support access to allied health and mental health services. These include services from individual allied health providers, including physiotherapists, Indigenous health workers, occupational therapists and psychologists.¹⁵ Specific MBS items also support access to psychological care. All these items and opportunities for funded health service delivery are potentially

valuable for people living with CHD.

However, only a minority of patients with cardiovascular disease have been given a CDM plan, and secondary prevention of CHD is not specifically incentivised in the way that management of conditions such as diabetes and asthma is. Increasing utilisation of CDM Medicare items would support more systematic care for people living with cardiovascular disease. Primary care practices can proactively use software and database data extraction for initiation and ongoing review of CDM plans (e.g. HealthTracker software provides point of care decision support for cardiovascular disease prevention and management, and a graphical patient counselling tool).²⁰

Conclusion

Major gains can be made in reducing the burden of CHD through preventing new cardiovascular events in patients who have survived ACS. Everyone, including patients, GPs, the ACS team and the health system, has a role to play in secondary prevention after ACS. It starts with the diagnosis of CHD and involves a lifelong approach, with adherence to evidence-based treatment. **MT**

References

A list of references is included in the website version of this article (www.medicinetoday.com.au).

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References

1. Australian Institute of Health and Welfare (AIHW). Australian burden of disease study: impact and causes of illness and death in Australia 2011. Australian Burden of Disease Study series no. 3. BOD 4. Canberra: AIHW; 2016.
2. Atkins E, Geelhoed E, Nedkoff L, Briffa T. Disparities in equity and access for hospitalised atherothrombotic disease. *Aust Health Rev* 2013; 37: 488-494.
3. Chew DP, Scott IA, Cullen L, et al; NHFA/CSANZ ACS Guideline 2016 Executive Working Group. National Heart Foundation of Australia and Cardiac Society of Australia and New Zealand: Australian clinical guidelines for the management of acute coronary syndromes 2016. *Heart Lung Circ* 2016; 25: 895-951.
4. Redfern J, Chow C. Secondary prevention of coronary heart disease in Australia: a blueprint for reform. *Med J Aust* 2013; 198: 70-71.
5. Woodruffe S, Neubeck L, Clark RA, et al. Australian Cardiovascular Health and Rehabilitation Association (ACRA) core components of cardiovascular disease secondary prevention and cardiac rehabilitation 2014. *Heart Lung Circ* 2015; 24: 430-441.
6. Chew DP, Scott IA, Cullen L, et al. National Heart Foundation of Australia and Cardiac Society of Australia and New Zealand: Australian clinical guidelines for the management of acute coronary syndromes 2016. *Med J Aust* 2016; 205: 128-133.
7. Redfern J, Maiorana A, Neubeck A, Clark A, Briffa T. Achieving coordinated secondary prevention of coronary heart disease for all in need (SPAN). *Int J Cardiol* 2011; 146: 1-3.
8. Schwalm JD, McKee M, Huffman MD, Yusuf S. Resource effective strategies to prevent and treat cardiovascular disease. *Circulation* 2016; 133: 742-755.
9. Michie S, Johnston M. Theories and techniques of behaviour change: developing a cumulative science of behaviour change. *Health Psychol Rev* 2012; 6: 1-6.
10. Clark AM, King-Shier KM, Duncan A, et al. Factors influencing referral to cardiac rehabilitation and secondary prevention programs: a systematic review. *Eur J Prev Cardiol* 2013; 20: 692-700.
11. Stead LF, Buitrago D, Preciado N, Sanchez G, Hartmann-Boyce J, Lancaster T. Physician advice for smoking cessation. *Cochrane Database Syst Rev* 2013; (5): CD000165.
12. Clark AM, McAlister FA, Hartling L, Vandermeer B, eds. Randomized trials of secondary prevention programs in coronary artery disease: a systematic review [Internet]. Rockville (MD): Agency for Healthcare Research and Quality (US); 2005.
13. Colquhoun DM, Bunker SJ, Clarke DM, et al. Screening, referral and treatment for depression in patients with coronary heart disease. *Med J Aust* 2013; 198: 483-484.
14. Lichtman JH, Froelicher ES, Blumenthal JA, et al; American Heart Association Statistics Committee of the Council on Epidemiology and Prevention and the Council on Cardiovascular and Stroke Nursing. Depression as a risk factor for poor prognosis among patients with acute coronary syndrome: systematic review and recommendations: a scientific statement from the American Heart Association. *Circulation* 2014; 129: 1350-1369.
15. Australian Government Department of Health. Medicare benefits schedule book. Canberra: Commonwealth of Australia; 2015.
16. Wagner E, Austin B, Von Korff M. Organizing care for patients with chronic illness. *Milbank Q* 1996; 74: 511-544.
17. Bodenheimer T, Wagner EH, Grumbach K. Improving primary care for patients with chronic illness. *JAMA* 2002; 288: 1775-1779.
18. Bodenheimer T, Wagner EH, Grumbach K. Improving primary care for patients with chronic illness: the chronic care model, part 2. *JAMA* 2002; 288: 1909-1914.
19. Harris MF, Zwar NA. Care of patients with chronic disease: the challenge for general practice. *Med J Aust* 2007; 187: 104-107.
20. Peiris D, Usherwood T, Panaretto K, et al. The Treatment Of cardiovascular Risk in Primary care using Electronic Decision support (TORPEDO) study – intervention development and protocol for a cluster randomised, controlled trial of an electronic decision support and quality improvement intervention in Australian primary healthcare. *BMJ Open* 2012; 2: e002177.