Innovative proposals to tackle our most costly disease group:
HEART DISEASE AND STROKE
The Challenge

With an ageing population and more prevalent risk factors, the Australian Institute of Health and Welfare acknowledges that chronic disease is ‘Australia’s biggest health challenge’.

The Australian Government has rightly acknowledged this challenge and is starting to look at measures to improve prevention and management of chronic disease in primary care.

However, to successfully meet the chronic disease challenge, Australia must do more to tackle one of its largest - and most costly - components: cardiovascular disease (heart, stroke and blood vessel disease).

This submission identifies cost-effective measures that can assist the nation to better meet the challenge of chronic disease, leading to:

- longer, healthier lives for the Australian people;
- greater productivity for employers; and
- more efficient and effective healthcare expenditure for government.

The Facts

Cardiovascular disease (mostly heart disease and stroke):

- is the most costly disease group at $7.7bn a year, or 10.4% of direct healthcare expenditure including $4.5bn on hospital admissions and $1.65bn on pharmaceuticals;¹
- is highly prevalent, with 4.2m Australians living with cardiovascular disease;²
- is a major cause of avoidable hospital admissions;³
- causes around one-third of all deaths (30%);⁴
- is forecast to remain the most expensive disease group, projected to rise from $12bn in 2012-13 to more than $22bn in 2032-33;⁵
- accounts for 24% of fatal burden of disease (Years of Life Lost) and 12% of Disability Adjusted Life years;⁶ and
- is largely preventable.
Our new policy proposals align with Australian Government objectives.

**Intergenerational Report**

The 2015 report identifies changing patterns of chronic disease as a key health cost driver, acknowledges the importance of prevention and improved cardiac care as a factor in increased life expectancy, and identifies the need for Australians to stay active as they age.

**Primary care reform for chronic, complex conditions**

The government is “committed to finding better ways to care for people with chronic and complex conditions and ensure they receive the right care, in the right place, at the right time”. (Health Minister Sussan Ley, August 2015)

**Reform of the Federation**

‘A new focus on primary care and keeping people out of hospital is necessary. When it comes to chronic care, the issues of diabetes, heart disease and mental health require particular attention’. (Leader’s Retreat communique, July 2015)

**Implementation Plan to Close the Gap**

The implementation plan has a strong focus on prevention, as well as on improving the patient journey of Aboriginal and Torres Strait Islander people through the health system. (October 2015)

**Health Minister’s commitment to physical activity**

“It is essential to the health of our nation that we are a physically active one. Too many Australians, young and old, are living sedentary lives and, frankly, it’s killing us.” (Health Minister Sussan Ley, National Press Club address, October 2015)

**Coalition health policy**

“Australia’s health system is under increasing pressure from rising levels of chronic disease”. (Coalition health policy, August 2013)
Solutions to tackle our most costly disease group: Heart disease and Stroke

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<td>7.9 National defibrillator program for sport venues and clubs</td>
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<td>7.10 Make more Australians eligible for time critical stroke</td>
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<tr>
<td>treatment</td>
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<td>7.11 Fund rollout of online stroke health professional portal</td>
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<td>7.12 Reduce the incidence of rheumatic heart disease</td>
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<td>7.13 Reporting of treatment times for heart attack and stroke</td>
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<td>7.14 National audit of cardiac rehabilitation services</td>
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1. Develop a national heart and stroke strategy

**Recommended action:** Develop a comprehensive national action plan for heart disease and stroke as an integral part of the National Strategic Framework for Chronic Conditions.

The development of an Australian heart and stroke strategy must be part of the new approach to chronic disease. No adequate approach to chronic disease would be complete without it.

While the Australian Government has developed strategies and action plans to address a number of chronic diseases, such as diabetes and cancer, there remains no national action plan or strategy for a disease group that causes almost 30% of all deaths - cardiovascular disease (CVD) which includes heart, stroke and blood vessel disease.

This is a glaring omission, particularly as there are major gaps in the current approach to cardiovascular disease prevention, early detection, management and research.

Much can be done – and done in a highly cost-effective way – to prevent premature death, improve quality of life and reduce the immense economic burden cardiovascular disease places on the health system.

A well-constructed national heart and stroke strategy can achieve these objectives and sit alongside other disease-specific strategies that have been developed, including the recently announced national diabetes strategy.

It is understood that disease-specific strategies, together with strategies for key risk factors will under-pin the National Strategic Framework for Chronic Conditions. This framework is being developed by the Federal Department of Health on behalf of all Australian governments.

This framework will replace the ageing National Chronic Disease Strategy, endorsed by health ministers in 2005.

The case for a heart and stroke strategy is clear. While mortality rates have been in decline for several decades, cardiovascular disease still causes almost 30% of all deaths, is a leading cause of the total burden of disease in Australia (14% of the total burden) and imposes massive social and economic costs comprising 10.4% of total direct healthcare expenditure.\(^7\) a

Disturbingly, the number of people with cardiovascular disease is set to increase as the population grows, ages, becomes increasingly overweight and obese, and some risk factors, such as poor nutrition, lack of physical activity, high blood cholesterol and high blood pressure, continue at alarmingly high rates.
Common risk factors for selected chronic diseases and conditions

<table>
<thead>
<tr>
<th>Conditions</th>
<th>Behavioural</th>
<th>Biomedical</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>Tobacco smoking</td>
<td>High blood pressure</td>
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<tr>
<td></td>
<td>Physical activity</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Alcohol misuse</td>
<td></td>
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<tr>
<td></td>
<td>Nutrition</td>
<td></td>
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<tr>
<td></td>
<td>Obesity</td>
<td></td>
</tr>
<tr>
<td>Coronary heart disease</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Stroke</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Type 2 diabetes</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Kidney disease</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Arthritis</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Osteoporosis</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Lung cancer</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Colorectal cancer</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Chronic obstructive pulmonary disease</td>
<td>●</td>
<td></td>
</tr>
<tr>
<td>Asthma</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Depression</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Oral health</td>
<td>●</td>
<td>●</td>
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Importantly, much of the burden of cardiovascular disease is avoidable – around 80% in the case of coronary heart disease. Many of the risk factors can also be prevented, including high blood pressure, high blood cholesterol, lack of physical activity, smoking, overweight/obesity and poor nutrition. Addressing these key risk factors will also benefit many other chronic conditions (see above).

The need to better tackle CVD was acknowledged when it was designated as a national health priority area in 1996. Subsequently, all health ministers agreed to a National Service Improvement Framework for Heart, Stroke and Vascular Disease in 2005. This was a key part of the national approach to improve health services for chronic disease under the National Chronic Disease Strategy.

While the CVD Framework sets out critical intervention points and priority areas to address, no implementation plan was ever developed and no funding provided to ensure the proposed outcomes could be achieved. Implementation was left to state and territory governments.

A decade has passed since the CVD Framework was agreed. But there is still no funded national action plan to reduce risk, improve early intervention and drive improvements in outcomes for patients. Such a plan would also help contain future costs for governments.

It will also help address significant gaps in the current approach to CVD. These gaps occur in current approaches to prevention, treatment and care of people with, or at high risk of developing CVD.
Addressing these gaps will reduce the number of people who have heart attacks and strokes and who die prematurely from these acute events. The concept of a national heart and stroke strategy or action plan already has strong support from stakeholders including state and territory governments.

The *Review of Cardiovascular Disease Programs* (Birch Review) commissioned by the Federal Department of Health and Ageing and released in 2011, found:

> “There is strong support across jurisdictional and non-government stakeholders for the formulation of a national action plan for CVD.”

The need for action plans at the national, state/territory and local level was also spelled out in the current National Chronic Disease Strategy, endorsed by health ministers in 2005.

And in 2011, Australia supported – and signed – the United Nation’s Declaration on Non-Communicable Disease in 2011, supporting global action on the four major chronic disease groups, including cardiovascular disease. This included a commitment to strengthening national chronic disease plans.
2. Detect and manage those at risk

**Recommended action:** Include the integrated health check and on-going management of patients at risk as part of the development of a new, quality-focussed Practice Incentive Program. Provide an MBS item to support uptake of the integrated health check.

Well-established, National Health and Medical Research Council (NHMRC) approved-guidelines call for general practitioners (GPs) to conduct assessments for eligible patients to detect those at risk of having a heart attack, stroke or developing type 2 diabetes or chronic kidney disease.

Because these diseases often co-exist and share many risk factors, it is recommended that these assessments be done concurrently as part of an integrated health check.

However, relatively few GPs routinely conduct these checks for eligible patients, therefore missing the opportunity to ensure people at high risk are managed to ensure they stay alive and well and out of hospital.

Combining a risk assessment for heart disease and stroke, a type 2 diabetes check and a kidney disease test into an ‘integrated health check’ is considered best practice as it consolidates the necessary checks a patient can request from their doctor.

During 2014, the then Health Minister, Peter Dutton, announced that the government would develop a new quality-focussed Practice Incentive Payment (PIP), by consolidating five existing PIP schemes into a single program.

Undertaking integrated health checks and ensuring on-going management of patients at risk should be incorporated into the proposed quality-PIP.

A new quality-focussed PIP which includes detection and prevention of vascular and related diseases should require general practices to:

- Check eligible patients for vascular and related conditions through an ‘integrated health check’ which includes an absolute cardiovascular risk assessment, diabetes check and kidney disease check;
- Manage the overall risk profile of patients, stratify risk (high, moderate, low) and address their combined risk factors through advice about healthy eating, healthy physical activity and healthy weight, medical management and/or facilitating and coordinating access to evidence-based prevention programs;
- Maintain a patient register, with recall and reminder system for patients eligible for assessment and those who require management of risk; and
Record and report proportion of eligible patients who are checked, who have their risk managed according to the relevant practice guidelines, who have a GP management plan, and who access evidence-based prevention programs.

The quality PIP should be linked to Primary Health Networks, with the Networks charged with promoting uptake of the integrated health check through education, systems support, creating linkages with relevant prevention services in the Network, measurement, and reporting and evaluation via quality improvement audits.

A new quality-focussed PIP would complement existing PIPs and encourage general practice to implement an integrated health check for the early detection and risk management of people at increased risk of developing chronic kidney disease, type 2 diabetes, heart disease or stroke.

The integrated health check would link into existing systems, for example, forming an integral part of chronic disease management as an entrance point into the current Chronic Disease Management Plan mechanism.

This integrated approach to detection and prevention of vascular and related disease incorporates the recommendations of existing guidelines and policies of the NHMRC, Royal Australian College of General Practitioners (RACGP), Australian Primary Care Collaboratives program (APCC), the National Prescribing Service (NPS) and other government agencies and primary care organisations.

This is a unique and important opportunity to ensure significantly greater adherence to existing evidence-based guidelines for the detection and prevention of the major vascular and related diseases and prevention of heart attack and stroke in people at high risk.

The potential benefits include:

- Improved detection of people at increased risk of vascular and related disease;
- Improved management of risk for people who have not developed disease;
- Reduced prescribing and reduced use of publicly funded health coaching and health promotion services for those at low risk, with more targeted, evidence-based prescribing for medications, including statins and anti-hypertensives and behaviour change/lifestyle interventions;
- Fewer avoidable hospitalisations;
- Reduced red tape, due to integration with existing primary care initiatives and a system which complements other mechanisms; and
- Improved quality systems in general practice through targets and audits to measure adherence to guidelines.
The inclusion of the integrated health check in a quality-focused PIP is supported by the National Vascular Disease Prevention Alliance (NVDPA), which comprises the Heart Foundation, National Stroke Foundation, Diabetes Australia and Kidney Health Australia.

In addition to inclusion in the proposed quality-focused PIP, an MBS item should be established to support uptake and implementation of the integrated health check. Together, these two measures should help ensure all eligible Australians have assessed and, where identified as being at risk of disease, effectively managed to ensure they don’t go on to have heart attacks or strokes or develop type 2 diabetes, kidney disease and other vascular conditions.
3. Fund 50 CVD Research Fellowships

**Recommended action:** Fund 50 cardiovascular research fellowships.

For more than 50 years the Heart Foundation has played a vital role in the research of the causes, treatment and prevention of cardiovascular disease and its related disorders.

Over this time, the Heart Foundation has invested more than half a billion dollars towards cardiovascular research helping to attract the best and brightest medical minds to cardiovascular research.

But cardiovascular research now faces a serious crisis. There is a need to break the cycle of decline and restore funding so that the research community can continue to build on the success of the past six decades and keep mortality rates in decline as the population ages and grows.

This is critical for the social and economic well-being of the nation, with cardiovascular disease the largest killer of Australians and the most expensive disease in terms of direct healthcare costs.

The achievements of cardiovascular research community have played a major role in turning the tide on cardiovascular mortality during the past six decades, the outstanding health achievement of the 20th century.

Health and medical research is not an expense. It is an investment that reaps enormous social and economic benefits and drives improvement in quality and outcomes.

**“The benefit-cost ratio of investment in research across specific disease areas found for cardiovascular disease (CVD, including stroke) the BCR was 6:1”**

Many advances in cardiovascular health have had their foundation in discoveries in health and medical research. Work conducted in prevention, treatment, quality of care, and rehabilitation and care in the community, all benefits directly from the application of evidence-based research.

Australian Government support is needed to maintain, in real terms, funding for health and medical research in cardiovascular health and the translation of research into practice.

Australian Government funding for 50 cardiovascular research fellowships will help break the cycle of decline in cardiovascular research and enable heart and stroke research to continue to contribute to keeping an ageing population fit, well and out of hospital.
The fellowships are aimed at attracting mid-career researchers who are five to twelve years post their doctorates.

In order to attract high-calibre candidates each fellowship will offer $110,000 per annum in a salary and an annual project support package of $40,000. This will require an investment of $24m over three years.

<table>
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<tr>
<th>Timeframe</th>
<th>Research Fellowships</th>
<th>Salary funding</th>
<th>Project funding</th>
<th>Total</th>
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<tbody>
<tr>
<td>2017 - 2019</td>
<td>50</td>
<td>$17m</td>
<td>$7m</td>
<td>$24m</td>
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The investment in 50 cardiovascular research fellowships will significantly boost the capacity of cardiovascular disease research in Australia. The table below shows that funding the 50 fellowships will almost double the total number of cardiovascular research fellowships funded through the NHMRC. As the most costly disease group and leading cause of the total burden of disease, it is vitally important to protect against a loss of research momentum and human capital while the Medical Research Future Fund comes online.

<table>
<thead>
<tr>
<th>Date awarded</th>
<th>Heart Foundation</th>
<th>NHMRC</th>
<th>Total</th>
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<tbody>
<tr>
<td>2010</td>
<td>16</td>
<td>50</td>
<td>66</td>
</tr>
<tr>
<td>2011</td>
<td>16</td>
<td>38</td>
<td>54</td>
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<tr>
<td>2012</td>
<td>19</td>
<td>53</td>
<td>72</td>
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<tr>
<td>2013</td>
<td>28</td>
<td>52</td>
<td>80</td>
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These fellowships are an important component in improving the level and quality of cardiovascular research undertaken and will achieve this through:

- Supporting early career researchers through the provision of salary support coupled with substantial project support for researchers at this critical stage in their career secures future capacity of cardiovascular research in Australia;

- Better supporting innovation by investing in proof of concept projects that test highly innovative concepts. Such early investment enables such projects to attract much more significant funding from other sources creating bigger research capacity and improving its capability to address cardiovascular health burden;
• Enabling research in areas of special need that helps address disparities in heart health for all Australians. The Heart Foundation is committed to health equity and research in areas of special need, such as cardiovascular disease in Aboriginal and Torres Strait Islander people and people from other vulnerable groups;

• Better connecting with the work of the Heart Foundation so that new approaches can focus on the opportunity to inform and strengthen the prevention, management and treatment of cardiovascular disease; and

• Boosting Australia’s capacity to keep the best and brightest research minds within the cardiovascular research community so that they can develop new treatments and heart healthcare innovations.

**Heart Foundation Research Program**

The Heart Foundation Research Program strategically drives cardiovascular research and facilitates high quality research into the causes, diagnosis, treatment, management and prevention of cardiovascular disease, including heart disease, stroke and blood vessel disease.

The program offers a range of awards to fund research in the fields of biomedical, clinical, public health and health services research through a rigorous independent peer review process. Importantly, the Program also:

• Funds outstanding research across the areas of biomedical, clinical and public health, and fosters the researchers of the future;

• Encourages blue-sky and innovative research;

• Facilitates better links between research and health outcomes;

• Supports multidisciplinary, institutional and sectoral collaboration;

• Communicates research activities and outcomes within the Heart Foundation;

• Supports the translation and use of knowledge generated by cardiovascular research; and

• Advocates for increased funding for cardiovascular research.
National Stroke Foundation Research Program

The National Stroke Foundation Research Program aims to support and translate high quality research that will lead to changes in practice, policy and knowledge resulting in prevention of stroke and improved quality of life for stroke survivors, their families and carers.

This is achieved through funding of research programs and awards including post-doctoral fellowships and PhDs and through the building of partnerships to improve research outcomes.

2015 - 2017 National Stroke Foundation research priorities include:

- Improve transition of patients from the acute setting (care plans, education, lifestyle, medication) and improving long term follow up and support (information, follow up etc);

- Bladder and bowel management (particularly in the acute phase);

- Recognition and management of fatigue;

- Improving delivery of high quality stroke care (especially aspects of care in the Quality Standards, access to stroke units and tPA);

- Technology related rehabilitation activity; and

- Carer support
4. National rollout of StrokeConnect

**Recommended action:** Support the StrokeConnect program to guarantee every one of the estimated 25,000 Australian stroke survivors discharged home from hospital each year is followed up, providing early intervention to prevent increasing dependency and to link them with appropriate information and services.

Stroke survivors often speak of falling into a ‘black hole’ once they are discharged from hospital without the support of follow-up in the community.

The often profound and prolonged brain injury that results from stroke can severely impact a survivor’s ability to navigate an often complex health and welfare system in order to access the support and services they need to aid and maximise their recovery.

This is made worse by inconsistent delivery of support from the hospital system prior to discharge and in discharge planning. The NSF commissioned a survey of stroke survivors to better understand their needs and relating to stroke and whether or not these needs were being met. The results showed that 96 percent of those surveyed reported having needs after their stroke. Of those, 84 percent had needs that were not fully met.

There is no comprehensive program in Australia to ensure that survivors of stroke are followed up by liaison workers or community nurses as is the case with other health conditions. This means that those who live in need and are unable to actively seek support are often left to suffer in silence. They are not supported to recover quickly from their stroke and instead live with disability and other needs that impact on their ability to actively participate in society.

Fully funded, the StrokeConnect program will provide a phone call to every stroke survivor in the period following discharge from hospital to home linking survivors with available services in the community appropriate to their needs. The program also works with hospitals to support discharge planning processes through provision of targeted information for stroke patients that prepares them for a life with stroke. Funding of this program will also support widespread availability of information resources for all survivors of stroke currently living in the community.

The National Stroke Foundation has been piloting and developing the StrokeConnect model of care in response to survivor needs since 2008. It has been partially operating in Queensland with State Government support since 2011. StrokeConnect is ideally positioned to operate with the new Primary Healthcare Networks.

Evaluation of the pilot program and the Queensland model has demonstrated improved coordination of care, increased participation in relevant programs and improved health related quality of life, mood and participation in community activities.
Investment of $5 million per year in the StrokeConnect program will guarantee a phone call to every Australian stroke survivor discharged home from hospital (estimated at 25,000 per year), linking them up with appropriate services and supports. It will also ensure widespread availability of targeted stroke information for stroke patients and survivors living in the community.

*Deloitte Access Economics estimates for this investment StrokeConnect would result in nearly 1,300 survivors regaining their functional independence each year contributing to a cost savings of over $30m per year*.¹³
5. Help all Australians move more, sit less

**Recommended action:** Develop a comprehensive, funded national physical activity action plan.

Australia needs a funded national physical activity action plan to help people move more and sit less. The evidence is compelling.

Physical inactivity is a major health problem in its own right. Disturbingly, two in three (66.2%) Australians aged 15 and over are sedentary or have low levels of exercise.\(^\text{14,15}\)

Physical inactivity:

- Costs the health budget an estimated $1.5bn a year; \(^\text{16}\)
- Causes an estimated 14,000 deaths a year; \(^\text{17}\)
- Contributes to almost one-quarter of the cardiovascular burden of disease in Australia (24%); \(^\text{18}\)
- Increases the risk of heart disease, stroke, diabetes, colon and breast cancer; and
- Is a critical factor in Australia’s obesity epidemic, with more than half of all Australian adults being overweight or obese. \(^\text{19}\)

If physical activity is thought of as a medication with an adult dose of 30 to 60 minutes a day, there is scarcely anything that could be taken daily that would provide comparable health benefits.

And yet, despite strong evidence of the benefits of physical activity, far too many Australians lead sedentary lives. Eight-in-ten children do not meet physical activity guidelines of 60 minutes a day.\(^\text{20}\)

Older Australians fare little better with most Australians being either sedentary or undertaking low levels of physical activity.\(^\text{21}\) Since 2001, the number doing very little or no exercise has continued to increase.

Despite these disturbing statistics, Australia is yet to develop a national physical activity action plan. Many other nations, including the US, New Zealand and Canada, have done so. In fact, an international assessment of 131 countries conducted in 2015 by the Global Observatory for Physical Activity, revealed that 37 nations have national physical activity action plans, and a further 64 had physical activity included as part of their chronic disease plans.
A way forward: The Canberra Communique

In September 2015, the Heart Foundation convened a national physical activity consensus forum to identify the key elements that should underpin a future national physical activity action plan.

The consensus forum - attended by nearly 100 leading Australian experts and stakeholders – agreed to nine priority areas, set out in the ‘Canberra Communique’ (see box overpage).

The Heart Foundation calls for the development of a national physical activity action plan that supports programs and initiatives covering the nine priority areas. These are based on the Foundation’s comprehensive Blueprint for an Active Australia.22

The Blueprint makes it clear that there are benefits to the economy, society and to government that go well beyond the very substantial benefits to the health of Australians. For example:

- Fit workers have lower absenteeism and higher productivity
- Well-designed communities that support walking and cycling can reduce traffic congestion
- Community physical activity can increase social wellbeing and increase social cohesion.

A cross-sector approach is vital to ensure these benefits are realised and that environments and facilities in schools, workplaces, communities and cities make it easier for people to walk, cycle and be active.

But, as the Blueprint clearly states, “government leadership and investment is vital”.23

We have been encouraged by the Health Minister’s recognition that physical inactivity is a major risk factor that needs to be addressed. Addressing the national Press Club in October 2015, the Minister said: “It is essential to the health of our nation that we are a physically active one. Too many Australians, young and old, are living sedentary lives and, frankly, it’s killing us.”
The Canberra Communique
Key actions that should underpin a national physical activity action plan

1. **Active children** – getting Australia’s kids moving.
2. **Active seniors** – keeping our seniors active, fit and well.
3. **Active workplaces** – driving productivity through physical activity and sitting less.
4. **Active transport, walking and cycling** – prioritising walking, cycling and public transport.
5. **Active cities and neighbourhoods** – creating liveable and active cities and neighbourhoods.
6. **Active healthcare** – prescribing physical activity in primary care.
7. **Active public education** – motivating Australians to ‘Move More, Sit Less’.
8. **Active clubs and sports** – boosting sport and recreation participation.

Improving links to lifestyle modification programs

Evidence-based, physical activity programs play a critical role in countering chronic disease and keeping people well and out of hospital. Currently, effective, evidence-based programs are not well integrated into primary healthcare, with poor linkages and referral pathways resulting in ineffective use of available resources.

The Heart and Stroke Foundations are working with an alliance of 11 partners - the National Physical Activity Alliance - to promote the need for better linkages for people living with, or are at risk of, chronic disease and who need to access an evidence-based lifestyle modification program.

With a range of existing evidence-based lifestyle modification programs that have proven effective in the prevention and management of chronic health conditions already developed, the Alliance is seeking support to develop a process which will allow increased accessibility for the Australian population into these programs.

The Alliance is seeking support to improve the accessibility and sustainability of existing evidence-based programs through clearly defined referral pathways and economic subsidies. This includes access to prevent chronic disease and manage existing disease effectively across all care settings (including rehabilitation and community based exercise settings) and the facilitation of financial incentives for providers to deliver these programs.
6. Support the Lighthouse Hospital Project

**Recommended action:** Support the rollout of Phase 3 of the Lighthouse Hospital Project to address gaps in care for Aboriginal and Torres Strait Islander people experiencing heart attack.

Heart disease is the single biggest killer of Aboriginal and Torres Strait Islander people, who continue to die from the disease at greater rates and at much younger ages than non-Indigenous Australians. While there have been some improvements in mortality rates for Indigenous people over recent decades, there remains a major life-expectancy gap between Aboriginal and Torres Strait Islander people and non-Indigenous Australians.

Coronary heart disease (CHD) is the leading cause of death among Aboriginal and Torres Strait Islander people. Compared to non-Indigenous Australians, Aboriginal and Torres Strait Islander people are 60% more likely to die to from CHD and it is responsible for one in every seven deaths among Aboriginal and Torres Strait Islander people. While Aboriginal and Torres Strait Islander people are more likely to die from CHD, those aged 35 to 54 are at least six times more likely to die than non-Indigenous Australians.

CHD is also the leading cause of morbidity and disability. The disease develops at younger ages and progresses faster than in non-Indigenous Australians. The burden of CHD among Indigenous people is also reflected in hospital admissions.

Aboriginal and Torres Strait Islander people have a higher likelihood of being admitted to hospital for an acute coronary syndrome (heart attack and unstable angina). They are more likely to die in hospital or to leave hospital against medical advice. While in hospital with a diagnosis of CHD, Indigenous Australians are less likely than non-Indigenous Australians to undergo a coronary procedure.

“If the death rate from cardiovascular disease for Aboriginal and Torres Strait Islander peoples was the same as for the total population life expectancy for Indigenous Australians would increase by around 6.5 years for both males and females.”
The Lighthouse Hospital Project

In 2012, the Heart Foundation and the Australian Healthcare and Hospitals Association received funding from the Department of Health and Ageing to scope a national, innovative ‘Lighthouse Hospital’ project. Phase 1 of the project aimed to identify and document case studies that highlighted best practice in the care of Aboriginal and Torres Strait Islander people experiencing heart attack.

A review of published literature found very few examples of targeted initiatives which aimed to improve access, quality of care or outcomes for Aboriginal and Torres Strait Islander peoples with heart attack. Due to the paucity of empirical evidence on heart attack treatment models in the literature; it was decided that phase 1 would work with ten healthcare services, recognised by their peers as providing exemplary care.

A strong recommendation arising from Phase 1 was that an industry-based quality matrix should be developed that could be incorporated into hospital accreditation processes, enabled the setting of care standards, including agreed performance indicators and monitoring processes, and overall enabled a commitment to quality improvement of care.

In 2013, the Heart Foundation and Australian Healthcare and Hospitals Association received funding for Phase 2 of the Lighthouse Project. Phase 2 of the Lighthouse Project runs until 1 June 2016 and aims to drive change in the acute care setting through implementation of quality improvement activities that improve care and outcomes for Aboriginal and Torres Strait Islander people experiencing heart attack.

In March 2014, a quality improvement toolkit was developed that provides a mechanism to evaluate systems and processes to ensure minimum standards of care, cultural safety and quality are being met, and identifies practices and/or actions that should be improved.

The toolkit utilises best practice evidence, guidelines, resources, recommendations from Phase 1 to provide health practitioners with practical activities that can be undertaken to drive change, address disparities and improve outcomes for Aboriginal and Torres Strait Islander people who present to hospital with heart attack.

The next phase

Phase 3 of the Lighthouse Project aims to drive efficiency and change within the health system to deliver healthcare that is evidence based, clinically accurate, culturally safe, responsive and accessible for Aboriginal and Torres Strait Islander people experiencing heart attack.
The Lighthouse Project Phase 3 proposes to recruit at least 24 hospitals across Australia to implement evidence based continuous quality improvement initiatives to ensure Aboriginal and Torres Strait Islander peoples receive clinically appropriate treatment, delivered in a culturally safe manner. The project will also enhance relationships between hospitals, local Aboriginal Community Controlled Organisations and Primary Health Networks and decrease fragmentation of health sectors while improving care coordination.

It is expected that Phase 3 of the Lighthouse Project will:

- Increase implementation of the evaluated toolkit in at least 24 hospitals across Australia including the appointment of at least 24 project officers;

- Validate the impact of the toolkit using both Commonwealth, state and hospital data;

- Measure health outcomes as per guideline based therapy for Acute Coronary Syndrome (ACS). This is based on the premise that all Aboriginal and Torres Strait Islander people with ACS should receive guideline-based therapy;

- Assess Aboriginal and Torres Strait Islander patients experience while in hospital, including treatment, information and any advice they may receive; and

- Enhance relationships with Primary Health Networks and Aboriginal Community Controlled Health Organisations to deliver integrated care between primary and acute care services.

Implementation of the toolkit will commence in 2018 and run through to 2020. Each hospital will recruit a project officer to support implementation of the quality improvement activities and each hospital will identify a number of quality improvement initiatives listed in the toolkit that are relevant to their hospital.

Supporting the rollout of Phase 3 of the Lighthouse Hospital Project will require an investment of $17m over five years. A local and national training and evaluation program will also be required to successfully rollout the project and determine specific outcomes.

The Lighthouse Project is an innovative, creative and tangible project that will enable the Department of Health to meet the deliverables of Domain 1: Health System Effectiveness within the Implementation Plan for the National Aboriginal and Torres Strait Islander Health Plan 2103-23.
7. A comprehensive approach to CVD

A complementary suite of prevention, treatment and monitoring measures are needed if Australia is to benefit from a comprehensive approach to CVD. A number of key areas need to be addressed if we are to successfully meet the challenge of this leading cause of death and chronic disease burden.

In addition to the measures listed above, a comprehensive approach will require a broad range of additional measures. Those listed below should be included as priorities.

**Prevention**

7.1 Increase public health investment

**Recommended action:** Funding for prevention should be increased to 5% of healthcare expenditure, with phased increases funded by small allocations from increased taxes on tobacco and alcohol.

Government funding for public health in Australia as a proportion of total healthcare spending is disturbingly low when compared with other OECD countries, ranking in the lowest third.

In 2011-12, just 1.7% of total government health expenditure went to public health activities, including prevention, protection and promotion. This was well behind New Zealand (7%), Canada (6.5%) and Slovakia (5%).

Funding for public health should be increased over time to 5% of total health expenditure. Such a move is in line with public expectations.

A survey commissioned by VicHealth and the Public Health Association of Australia in 2010 found that a majority of respondents supported additional funds being allocated to federal and state government health budgets to prevent people from getting sick and to help people have better health (79.1% support or strongly support).

Nearly three-quarters of respondents (73.3%) supported increasing funds spent on prevention from 2% to 5% of the health budget.27

All Australian governments need to work together to lift funding to 5% of total healthcare expenditure.
7.2 Strengthen the national food reformulation program

**Recommended action:** Renew and strengthen the national food reformulation program through the Healthy Food Partnership.

Food reformulation – government working with public health groups and industry to reduce salt, saturated fat and sugar in processed food while boosting good nutrients, such as fibre – is one of the most cost-effective public health measures available to government.

In the UK, the food industry has removed around 30% of salt from the food supply, resulting in an estimated saving of some 9,000 lives a year from heart attack and strokes.

Food reformulation is being increasingly used worldwide to prevent premature death from diseases such as heart disease, stroke, diabetes and some cancers. This approach was pioneered in Australia by the Howard Government when then Assistant Health Minister, Christopher Pyne, convened a quick service restaurant industry roundtable on trans fats.

In 2009, the Australian Government established a national food reformulation program, known as the Food and Health Dialogue. This voluntary partnership achieved measureable improvements in the food supply, with 2,200 tonnes of salt being removed per year from the first four food categories alone.

An independent evaluation, published in the journal *Nutrients* in September 2014, looked at the impact of Australia’s fledgling food reformulation program – the Food and Health Dialogue. It found substantial decreases in salt in reformulated bread and cereal categories and declines in salt in processed meats and concluded: “These data show that the Australian food industry can reduce salt levels of processed foods and provide a strong case for broadening and strengthening of the Food and Health Dialogue process”.

The potential health gains from food reformulation are enormous. Reducing intake of sodium from processed food by 15-25% in Australia would avert 5,800-9,700 heart attacks and 4,900-8,200 strokes within ten years.

In November 2015, Rural Health Minister Fiona Nash announced the Healthy Food Partnership to replace the Food and Health Dialogue, with a focus on food reformulation, portion control and education. Additional support for the work of the Healthy Food Partnership will enable it to develop an education campaign to promote healthy eating, especially the consumption of fruit and vegetables, portion control and drive robust food reformulation work. In addition, it would support a salt study to determined salt consumption in Australia.
7.3 Develop, fund a comprehensive obesity prevention strategy

**Recommended action:** Develop and fund a national obesity prevention strategy.

Being overweight or obese are risk factors for many chronic diseases, including heart disease, stroke, type-2 diabetes, kidney disease and some cancers.

In 2014-15, close to two-in-three Australian adults were overweight or obese and for children aged 5-17, more than one-quarter are overweight or obese. \(^{30}\) Also, in the past 20 years, the average Australian has put on 6kg, and if this rate continues, by 2030, the average Australian will be obese.

Data from the report *Overweight, obesity and cardiovascular disease – past, present and future* predicts that the number of obese adults (BMI>30) is also expected to double (41%) by 2031-32.

As a result, the total expenditure on cardiovascular disease and type 2 diabetes attributable to increased BMI will increase from $3.9bn in 2011-12 to $16.9bn in 2031-32, if overweight and obesity continue to increase at the same rate as 1995-2005.\(^{31}\)

The National Preventative Health Taskforce released a major report on preventive health with a major focus on obesity, alcohol and tobacco in 2009. It concluded that there was an urgent need for action, stating:

*One of the greatest public health challenges confronting Australia and many other industrialised countries is the obesity epidemic. Australia is one of the most overweight developed nations, with over 60% of adults and one in four children overweight or obese. The prevalence of overweight and obesity has been steadily increasing over the last 30 years.*

*Obesity is particularly prevalent among men and women in the most disadvantaged socio-economic groups, people without post-school qualifications, Indigenous Australians and among many people born overseas. It will be important to work together as a nation to solve this serious problem. There is no simple solution or singular approach.*

The comprehensive, staged recommendations of the Taskforce continue to be relevant and widely supported. It is disturbing that few have been embraced.

The Australian Government should:

- Develop a comprehensive, funded national obesity prevention strategy, drawing on recommendations of the Preventive Health Taskforce;
- Provide robust support for implementation of the Health Star Rating front-of-pack labelling system, with increased support for education campaigns;
• Strengthen the national food reformulation program;

• Fund robust obesity prevention public education campaigns;

• Prohibit the exposure of children to the marketing and promotion of junk food to children during TV programs and online advertising popular with children; and

• Explore options for a tax on sugar-sweetened beverages, with funds raised earmarked for health promotion.

7.4 Invest in tobacco control, especially education campaigns

**Recommended action:** Continue to invest in tobacco control to ensure full implementation of Framework Convention on Tobacco Control.

Smoking remains a leading cause of ill-health, death and disability in Australia. The Global Burden of Disease 2013 study shows tobacco accounts for some 22,500 deaths a year in Australia and is estimated to account for 10% of the total burden of cardiovascular disease.

The risk of heart disease and stroke is two-to-four times higher among smokers than non-smokers and this risk increases with the heaviness of smoking. Smokers have more heart attacks at a much younger age than non-smokers and have up to four times the risk of suffering sudden cardiac death than people who don’t smoke.

The Heart Foundation and the Stroke Foundation commends the Australian Government for its commitment to tobacco control. It is a commitment that is saving lives, including many from heart attack, peripheral vascular disease and stroke.

Australia has been a global leader in tobacco control for the past three decades. This took a major step forward in recent years with the introduction of the world-first plain packaging of cigarette packets, increases in tobacco taxes, and the decision by the Future Fund and a number of superannuation funds to end their investment in tobacco companies. The Australian Government’s on-going commitment to fund tobacco control public education campaigns is deeply appreciated and continues to save lives.

The combined approach of legislation, education campaigns and taxation works exceptionally well. In 1980, some 35% of Australians were daily smokers. Today 16% of Australians are daily smokers. This is a highly significant public health achievement.

Yet more needs to be done if Australia is to reach its target of 10% of the population as daily smokers by 2018.
The Heart Foundation and the Stroke Foundation call on the Australian Government to commit to extend the 12.5% tobacco excise for an additional four years from 2017. This will ensure Australian tobacco taxation stays in line with World Health Organisation recommendations. The Parliamentary Budget Office indicates that an additional 2.5% increases will raise $47.7b over the medium term (next decade). The Government should ensure some of the funds raised are reinvested in public health and prevention to help bring Australia into line with high-performing OECD nations when it comes to investment in public health.

“We can take pride in the bipartisan approach that has seen support for tobacco control from successive Australian governments. But much remains to be done”
Mike Daube, ‘Fifty Years On’, MJA 2014

For many years, we knew that cigarettes kill half of all lifetime smokers. But recent Australian research reveals this to be an under-estimate and that smoking will kill two-in-three long-term smokers.\(^\text{40}\)

The research, from the Sax Institute’s 45 and Up Study, supported by the Heart Foundation and NSW Cancer Council, found that two-thirds of deaths in current smokers can be directly attributed to smoking – much higher than international estimates of 50%.

The four-year analysis looked at health records from more than 200,000 people in NSW and found current smokers were cutting at least 10 years off their lifespan.

The Heart Foundation and Cancer Council Australia believe widespread e-cigarette use could undo decades of public health policy work to reduce the appeal of cigarette use in children. The federal government should support the recommendations that have been made to ensure tighter controls are placed on e-cigarettes.

The Heart Foundation calls for:

- Continued support and defence of plain packaging of tobacco products
- Strong support for smoking education campaigns
- Extend the 12.5% annual tobacco tax increase beyond 2017
- Continued investment at high levels in the Tackling Indigenous Smoking initiative
- Implementation of the Heart Foundation/Cancer Council position statement on e-cigarettes.
**Treatment**

### 7.5 Review the national cardiovascular disease risk guidelines

**Recommended action:** Invest $1.2m to review the current guidelines for the management of absolute CVD risk, developed according to NHMRC requirements.

The NHMRC approved guidelines for the management of absolute cardiovascular disease risk (2012) support clinicians to assess risk of heart attack or stroke among the general population (45 years and over).

Absolute CVD risk assessment is the probability, expressed as percentage, that a person may experience a cardiovascular event within a specified period. This guideline, developed with the assistance of Australian Government funding, is a lynchpin to preventive initiatives to reduce the incidence of heart attack and stroke across Australia.

The NVDPA recognise the need to update evidence-based clinical recommendations to guide best practice.

Each year, around 55,000 Australians suffer a heart attack (which equates to one heart attack every 10 minutes) and around 430,000 Australians are living with stroke. The extent of this pressing problem is illustrated by the following Australian statistics:

- Around 4.2m Australians had a long-term cardiovascular disease in 2011-12;
- There were 43,603 deaths attributed to CVD in Australia in 2013;
- CVD was responsible for more deaths than any other disease group (30% of the total);
- CVD was the main cause for more than 480,000 hospitalisations in 2013-14;
- CVD has the highest level of health-care expenditure of any disease group;
- Days of reduced activity for people with CVD were 1.4 times the average Australian; and
- Lower rates of employment and absenteeism due to CVD in 2004 were estimated to cost the economy around $2.2bn.

Clinical recommendations that improve detection and underpin evidence-based medicine to reduce CVD events are a priority in Australia. Emerging evidence from comparative assessment programs in New Zealand and overseas will inform new clinical guideline recommendations.
New Zealand Primary Healthcare Organisations have achieved 86% assessment rates of the eligible population, drawing on clinical guidelines as the basis for detection and management of risk, compared to 25% in Australia. Without updated evidence-based guidelines, patient care could be compromised, leading to increased hospitalisations, and a reduced workforce.

There is an opportunity for significant positive change with limited investment. New evidence-based recommendations with the updated guideline will:

- Guide clinicians in evidence-based practice to prevent the onset of CVD;
- Equip clinicians with advanced risk assessment and management algorithms, supporting earlier detection and management of CVD risk; and
- Reduce the cardiovascular disease burden on the Australian healthcare system.

An investment of $1.2m to fully update the clinical recommendations over two years will help to establish and maintain the new online resource ensuring that health professionals are able to maintain a commitment to continuous professional quality improvement. Uptake of the new guideline will be strengthened by the support of the Improvement Foundation (Australian Primary Care Collaboratives) and colleges of general practice to ensure wide communication and to encourage broad clinical involvement. A better quality workforce delivers better outcomes for patients, more efficient care and dramatically lower health costs.

7.6 Fund the review of vital heart failure guidelines

**Recommended action:** Update the clinical recommendations in the prevention, detection and management of chronic heart failure, submit for inclusion on the NHMRC work plan and work through the processes for NHMRC approval.

Joint National Heart Foundation/Cardiac Society of Australia and New Zealand clinical guidelines for Chronic Heart Failure (2011) support clinicians to deliver best-practice care for Australians living with chronic heart failure. The guidelines require an update in response to emerging evidence on new therapies.

Widely considered the ‘epidemic of cardiology’, chronic heart failure remains a major public health issue with discordant management, recurrent hospital admission and disconnected care. Prevalence of this debilitating condition is high (rates of over 23% in those aged over 65 years) and among the most common reasons for GP consultation.

Heart failure is a pressing problem:

- Chronic heart failure affects 2% to 3% of the population, with rates steeply increasing with age;
• 30,000 Australians are diagnosed with heart failure each year;

• Heart failure is 1.7 times more common among Aboriginal and Torres Strait Islander people than other Australians, and occurs at a younger age; \textsuperscript{43}

• More than 53,000 Australians were hospitalised due to chronic heart failure in 2013-14, equating to over 370,000 bed days; \textsuperscript{44}

• Re-admission rates range between 13\% to 33\% in all cause 30 day re-admission rates for primary index admission of heart failure; \textsuperscript{4} and

• Heart failure consumes $725m of the national healthcare budget, with two thirds of this amount spent on hospital services.

Updated Heart Foundation guidelines will synthesise emerging evidence into clinical recommendations to guide clinicians in earlier case detection and improved management of heart failure patients, helping them to remain out of hospital for longer.

The Heart Foundation offers a suite of supporting resources designed to guide systems of care to underpin adherence to the new guideline. A national policy framework identifies principles and actions underpinning a systematic approach to heart failure care operating across state and territory jurisdictions that will lead to improved health outcomes; specifically event-free survival (a composite of the number of emergency presentations, hospitalisations and premature deaths).

There is an opportunity for significant positive change with limited investment. New evidence-based recommendations with the updated guideline will:

• Guide clinicians in evidence-based medicine to prevent the onset of heart failure;

• Equip clinicians with advanced diagnostic treatment algorithms, supporting earlier detection and management of patients diagnosed with heart failure;

• Prevent simple hospital admissions for chronic heart failure (diagnostic-related group 62B) costing approximately $3,440 each, and more complex admissions (diagnostic-related group 62A) costing $7,260. Based on these figures, a reduction in the estimated 2,000 readmissions could result in savings off the annual cost of hospital stays that currently ranges between $6.8m to $14.5m; and

• Contribute to improved clinical data that will assist in local interrogation to understand the causes of variation in performance or determine acceptable levels for best practice.\textsuperscript{45}

An investment of $800,000 to fully update the clinical recommendations over two years will help to establish and maintain the new online resource ensuring that health
professionals are able to maintain a commitment to continuous professional quality improvement. Uptake of the new guideline will be strengthened by the support of existing state-based cardiac clinical networks to ensure wide communication and to encourage broad clinical involvement. A better quality workforce delivers better outcomes for patients, more efficient care and dramatically lower health costs.

### 7.7 Fund a national heart failure study

**Recommended action:** Fund a national heart failure study to drive better treatment, resource allocation and quality of care.

Australia needs a national heart failure study to better understand the prevalence and impact of this major disease. It is almost unfathomable that there is no on-going comprehensive data collection for a disease that afflicts so many Australians and is a major driver of costs and avoidable hospital admissions. Improved data will help drive better treatment, resource allocation and quality of care.

### 7.8 Telemedicine pilot programs for Stroke

**Recommended action:** Support an expansion of current telemedicine stroke pilots to deliver 24/7 acute stroke expertise to more regional hospitals.

Regional Australia is ageing with a high proportion of the population aged over 65 years and therefore more likely to suffer a stroke. In regional Victoria and northern New South Wales alone there are 5000 new strokes each year. These strokes occur in areas where there is limited access to stroke specialists and therefore limited treatment options.

When someone suffers a stroke, every minute counts. The sooner treatment is provided, the better the chance of a good recovery.

National Stroke Foundation supports a proposal by the Australian Telestroke Network (ATN) to expand telemedicine stroke services to more regional areas of Australia.

Telemedicine stroke services were first trialled in the Victorian Stroke Telemedicine (VST) Program. This program piloted the ability to facilitate rapid clinical decision-making and treatment of stroke by seamlessly connecting rural and regional emergency departments to a roster of Melbourne-based neurologists.

The neurologists were accessible 24 hours a day, seven days a week, via a single 1300 telephone number (1300-TELEMED). Through new state-of-the-art mobile computing technology and software, the neurologist could remotely examine patients at the bedside, review brain imaging and provide rapid diagnosis and treatment advice, irrespective of their geographic location.

The VST is demonstrating that people living in rural and regional areas can quickly access stroke specialists so as to deliver high-impact stroke therapies such as
thrombolysis (clot-dissolving drugs) and endovascular clot retrieval (catheter removal of the blood clot). It is saving lives.

Prior to VST, regional hospital emergency departments had been unable to consider these therapies as they require rapid assessment by a specialist with stroke expertise to ensure a patient is suitable for treatment. This is important because “Time is Brain” – therapies must be given as soon as possible after stroke symptom onset to achieve a good outcome.

A telestroke service has been well established (and working well) in Europe and North America. The VST is demonstrating the potential for effective and efficient telestroke care in Australia.

There is an opportunity to expand on the work undertaken so far and further demonstrate the potential for a truly national telestroke network capable of delivering equity of stroke healthcare to all regional hospitals. Through this project we can continue to build regional stroke patient access to stroke specialists and best practice standards of stroke care – the quality of care that everyone deserves.

The ATN will see stroke specialists available 24/7, across state borders, and demonstrate the potential for a truly national network of acute stroke specialists.

### 7.9 National defibrillator program for sports venues and clubs

**Recommended action:** Support a public access defibrillator program with funding provided on an application basis for purchase, installation, maintenance and training for 4,000 defibrillators in sports clubs and sporting venues over four years.

The Heart Foundation calls on the Australian Government to fund a national program to get 4,000 defibrillators into public places, particularly sporting venues and sports clubs, and support associated training programs, including school-based first aid courses.

In Australia, less than one-in-ten people who have a sudden cardiac arrest outside of a hospital survive. A cardiac arrest occurs when the normal rhythm of the heart is suddenly disrupted, drastically diminishing the heart’s capability to pump blood around the body.

A study published in the journal *Circulation* in 1998, found that public access defibrillators may be economically attractive in the United States, where 360,000 Americans experienced sudden cardiac arrest each year. According to the authors; “Our analysis shows that implementation of PAD in an urban centre in the United States is potentially economically attractive. Furthermore, defibrillation of out of hospital sudden cardiac arrest patients by lay or police responders may save the
lives of thousands of Americans each year. These represent important potential public health benefits.”

The good news is that early defibrillation (an electric shock to the heart) together with cardiopulmonary resuscitation (CPR) can be life-saving in the event of a sudden cardiac arrest. To have the absolute best chance of success, defibrillation must be carried out in the first few vital minutes after sudden cardiac arrest. Therefore, to ensure Australia achieves and maintains world’s best practice in this area, a program to have public access Automated External Defibrillators (AEDs) located in strategic positions across Australia along with trained people to use them is essential.

In 2005, the Howard Government funded a demonstration project - HeartStart Australia - to test the viability of a program to install defibrillators in public areas. St John Ambulance was engaged to design and implement the project between 2005 and 2007 at a cost of $870,000. The project was evaluated with a report completed in 2008. The report concluded that the demonstration project could be judged as:

- **Effective** in providing a capable response to sudden cardiac arrest in public areas and demonstrating that Australian organisations can accept AEDs as part of their Occupational Health and Safety responsibilities;

- **Appropriate** as a method for establishing Public Access Defibrillation (PAD) in Australia and demonstrating the value of AEDs, but was not necessarily seen as the most appropriate model of defibrillation in the long term; and

- **Efficient**, with the proportion of program administration costs at 10-15% well within acceptable benchmarks.

By 2008, Project HeartStart had already saved 14 lives with more anticipated lives to be saved over the life expectancy of the units. Some $1.2m had been invested into the project with 302 AEDs rolled out across the nation. More than 3,000 people were trained in basic life support and defibrillation, with the bonus of additional life-saving skills being made available throughout the community.

Venues for their placement included airports, railway stations, fitness centres, entertainment centres, council facilities, various recreational clubs, schools, pools, police departments, commonwealth departments, and shopping centres, snow resorts, sporting bodies, tourist attractions, casinos and rural and remote communities where medical response times may be delayed.

Ongoing support by the Australian Government was sought in 2008 and 2010 to continue the roll out of PAD across Australia. But without support, the project momentum was lost and the project closed.

In 2012, the Heart Foundation, in collaboration with the Australian Resuscitation Council and St John Ambulance Australia, updated the joint position statement: Early Access to Defibrillation.
The statement highlights the importance of making AED units widely available within the community for the prompt treatment of sudden cardiac arrest. It calls on governments to:

- Increase the number of AEDs that are accessible in places where large amounts of people frequent;
- Build community confidence in the use of AED through the implementation of community awareness campaigns;
- Mandate the registration of all private and publically accessible AEDs, at the time of purchase, with local emergency service providers such as the ambulance service and Triple Zero (000) call centres; and
- Develop a minimum standard to regulate the deployment of AEDs within large workplaces (over 200 employees) and to train employees in both AED use and CPR.

In 2016, the Victorian government is funding the rollout of 1,000 free defibrillators to sporting clubs throughout the state, based on need. This program was launched following a number of deaths of promising young sportsmen on Victorian sporting fields in the previous years. Over 900 clubs expressed interest in receiving the free defibrillators along with an online training package to train users in each club. Some of the clubs took advantage of a special pricing for defibrillators to ensure that their club was prepared if they needed it.

“The provision of defibrillators in public places - a concept internationally known as ‘public access defibrillation’ - is now widespread in many places throughout the world including the United Kingdom, Europe, USA and in every state and territory in Australia. These devices are easy to use and are now regarded as part of basic CPR training. Evidence from a number of studies has clearly shown a greater chance of survival from cardiac arrest in places where defibrillators are publically available”

*The late Professor Ian Jacobs, Australian Resuscitation Council Chairman, Media Statement, September 12, 2008*
7.10 Improve eligibility to receive time-critical stroke treatment

**Recommended action:** Increase community knowledge of stroke symptoms so that patients get to hospital in time for life-saving treatment through mass media advertising combined with targeted regional community awareness activity.

Life-saving clot busting treatment can only be administered within 4.5 hours of a stroke and currently only 7 percent of Australian stroke patients receive this therapy. Failure to act when stroke symptoms arise is the main factor behind stroke treatment delay, accounting for around 68 percent of the total delay in time to admission for ischaemic stroke.

Many people in Australia are unable to act because they cannot recognise the symptoms. Currently, one in five people cannot recognise any signs of stroke and only a third of people can recognise three or more signs.

Additionally, many people with transient signs of stroke (transient ischaemic attack or TIA) do not act as symptoms seemingly resolve themselves. And yet up to 20% of patients having a TIA go on to have a subsequent stroke within 90 days if early preventative treatment is not instituted.

Half of those who experience stroke symptoms delay calling an ambulance; many individuals hope symptoms will alleviate; or will elect to speak to friends, family or their general practitioner.

Since 2007, the National Stroke Foundation has been successful in raising awareness of the signs of stroke by promoting the FAST test through social marketing campaign activity. Australian Government funding supported a national rollout of the campaign in early 2014 and philanthropic funding supported a regional pilot of community-based awareness activity in Wagga Wagga and Warrnambool in the same year.

The central feature of the FAST campaign is mass media advertising using a pre-existing ‘Fire in the Brain’ television commercial and associated print, radio and online promotion. Given the success of our regional pilot we propose to expand this into other regional areas utilising volunteers to raise awareness of stroke signs and stroke risk through community talks and community engagement.

The FAST test is an easy way to remember and recognise the signs of stroke. FAST stands for Face, Arms, Speech and Time to act. Using the FAST test involves asking these simple questions:

**Face** – Check their face. Has their mouth drooped?

**Arms** – Can they lift both arms?

**Speech** – Is their speech slurred? Do they understand you?

**Time** – Is critical. If you see any of these signs call Triple Zero (000) straight away.
Evaluation of the program demonstrates that FAST increases community awareness of stroke signs in all areas where it is delivered. In Victoria, where state government funding was provided for the program between 2007 and 2012, awareness of the signs of stroke is the highest in the country. Furthermore, independent analysis of Melbourne ambulance data has identified increased dispatches for stroke in the month following each FAST campaign push, demonstrating the ‘call Triple Zero (000)’ message gets through.

7.11 Inform me: online portal for stroke health professionals

**Recommendation:** Support the rollout of an innovative online stroke health professional portal which will improve individual health professional practice and facilitate targeted local quality improvement activities.

The gap between best-practice clinical care and what actually happens in the Australian healthcare system is resulting in poorer health outcomes and increased costs associated with stroke.

The 2015 National Stroke Audit of Acute Services found limited improvement in stroke care and services in Australia, despite significant advancements in the treatment and care guidelines for acute stroke and the best efforts of health professionals and hospitals.

The results demonstrate that there is enormous opportunity to improve care and deliver better outcomes for patients. Key to achieving this is the provision of direct support to stroke health professionals through information and guidance to improve their individual clinical practice.

In response to health professional feedback the National Stroke Foundation has developed an innovative online resource that will provide information and support to clinicians, administrators working in stroke. As the key stroke website for health professionals it will bring together the latest evidence, link health professionals with their peers, provide monitoring data on current practice, share success stories of sites that have improved care and also offer tools and resources to maximise the quality of stroke care delivered.

The portal will provide up-to-date education on aspects of best practice stroke care. This will be used by hospital clinicians, those working in the community and general practice.

InformMe is designed for healthcare professionals who work with stroke patients across the full continuum of care including in the acute and rehabilitation hospitals and community setting. Health professionals include treating physicians, neurologists, rehabilitation consultants, physiotherapists, speech pathologists,
occupational therapists, social workers, psychologists, dieticians and other allied health professionals and healthcare administrators.

The portal has been developed with funding from the National Stroke Foundation and philanthropic partners. We are calling on government investment to support ongoing development and management of the resource so as to maximise the benefit it provides. This includes ongoing efforts to incorporate and embed contemporary and evidence education and training modules, maintenance of quality care data and engagement with health professionals who use the site.

By funding this program government will contribute directly to better health outcomes for stroke patients by ensuring health professional have access to tools and resources that will improve clinical practice and ensure better adherence to national clinical care standards.

7.12 Reduce the incidence and impact of rheumatic heart disease

**Recommended action:** Extend funding for jurisdictional control programs and RHDAustralia, and invest in the clinical trial of a RHD vaccine.

Rheumatic Heart Disease (RHD) is primarily a disease of social disadvantage in which the highest burden, sadly, falls on Indigenous communities. It is described as a ‘third world disease’ that unnecessarily adds to the already high burden of cardiovascular disease for Aboriginal and Torres Strait Islander people. Indigenous Australians are up to eight times more likely than other Australians to be hospitalised for rheumatic fever and RHD. In the Northern Territory in 2010, the prevalence of RHD among Aboriginal and Torres Strait Islander people was 26 times the rate for non-Indigenous people.

In 2008, the Australian Government initiated the National Rheumatic Fever Strategy consisting of register-based control programs in three jurisdictions (now four) and a National Coordination Unit. This strategy has proven successful in improving the detection of RHD, treatment compliance and knowledge and awareness among healthcare professionals.

The four jurisdictional control programs in South Australia, Queensland, Western Australia and the Northern Territory have made significant progress in the detection of RHD and patient adherence to secondary prophylaxis treatment. The Northern Territory and Western Australia programs have both doubled the number of patients receiving 80% of the required medication since their introduction. In South Australia, 207 patients are enrolled on the register and, on average, RHD patients are getting 83% of their medications.
We ask that the Australian Government provide certainty and commit to quadrennial funding of the jurisdictional control programs (until mid-2020), along with guaranteed funding until at least the same date for RHDAustralia, the National Coordination Unit.

In addition, we ask that the government support the development of an RHD vaccine. Professor Michael Good Institute at Griffith University, Queensland is currently working on a vaccine to prevent infection from all strains of streptococcus, the germ responsible for causing RHD as well as serious deep tissue infections.

His team is at an important point in their research and are looking to complete toxicology tests so that they can begin clinical trials. Following the toxicology testing, they are planning to conduct a Phase I clinical trial. However, human trials are very expensive and they need around $1.5m to complete the trial. Most of the $1.5m required has been raised but a further $400,000 is needed to commence the study.

It is unacceptable that Aboriginal and Torres Strait Islander peoples have among the highest rates of RHD in the world and are 20 times more likely to die from the disease than other Australians. These three measures will help monitor, treat and hopefully eradicate RHD from our nation.

**Monitoring**

**7.13 Reporting of treatment times for heart attack and stroke**

*Recommended action:* Identify and address critical cardiovascular data gaps to enhance quality and performance of healthcare delivery.

There are well documented gaps in our cardiovascular data collection which inhibit activities and actions to improve quality and outcomes in resource allocation and service delivery.

For example, we have poor data on the time it takes to treat patients with heart attacks.

Fast treatment, either through thrombolysis (administration of clot-busting drugs) or angioplasty (the use of balloons and stents to open blocked arteries) is critical to achieving good outcomes for people suffering from heart attack. It can make the difference between life and death. Fast treatment can also reduce the amount of damage done to heart muscle, reducing the chances of a further heart attack.

In the UK, data collected on the time it takes to treat heart attack sufferers has helped drive significant cuts in treatment times, saving lives and improving life expectancy.
Despite the fact that CVD is the nation’s leading killer, a major cause of disability and the most expensive disease group in terms of direct healthcare costs, there are major gaps in heart attack data collection in Australia, including:

- No national quality/performance indicator sets for heart attack and stroke, and
- No frameworks to improved treatment time.

There is much room for improvement. A study published in the *Medical Journal of Australia* in 2010 highlighted disturbing evidence that many people having heart attacks didn’t get the treatment they should have, or didn’t get access to treatment within the recommended time.\(^{48}\)

The study found that just over one-in-five patients were likely to have been eligible for heart attack treatment (reperfusion therapy) but failed to receive it.

Evidence suggests:

- Only 23% of heart attack patients are getting timely access to treatment, despite time factors being essential in determining survival rates;
- There is significant variation in the implementation guidelines for the management of patients with heart attack and angina;\(^{49}\)
- Recent NSW health data indicates that revascularisation rates can vary by up to 30% between area healthcare services with comparable numbers of catheterisation facilities;\(^{50}\)
- There is well-documented under-use of key CVD medicines at discharge and at 12 months after discharge;
- The Heart Foundation recommends that eligible heart attack patients are given thrombolysis within 30 minutes, if primary angioplasty is not available. However, in the first half of 2000, fewer than 80% of eligible patients were treated within one hour;\(^{51}\) and
- Relatively few (estimated to be around 30% or less) of eligible Australian patients access cardiac rehabilitation programs.

The cost of treating and managing patients with heart attack and angina is enormous. The total cost to the economy has been estimated to be $17.9bn a year, with direct healthcare costs accounting for almost $2bn a year.\(^{52}\)

The Heart Foundation acknowledges and applauds the development of the recent Clinical Standard for Acute Coronary Syndromes under the auspices of the Australian Commission for Safety and Quality in Health Care.
This represents a major step forward in addressing variations in care. But investment is needed to support this. In particular, national CVD data sets are needed to highlight variations in care and drive improvement in quality care.

A comprehensive effort is needed to ensure critical CVD data is collected, analysed and published. The Australian Institute of Health and Welfare should be commissioned to identify and prioritise missing CVD data gaps, in consultation with key stakeholders. These should include:

- Time from ‘call’ to ‘treatment’ through (i) thrombolysis and (ii) angioplasty/stent implantation;
- Proportion of patients admitted to hospital with coronary heart disease who on discharge receive (i) appropriate medications and (ii) are referred to a cardiac rehabilitation/secondary prevention program; and
- The proportion of eligible patients who access and complete a cardiac rehabilitation program or who enrol in a secondary prevention program.

In addition, longitudinal studies of population groups disproportionately affected by CVD are essential to inform evidence-based prevention programs and monitor trends. A co-ordinated approach is needed to continue the collection of risk factor data among those who live in rural and remote areas, Indigenous people and those with low socio-economic status.

Primary Health Networks should support general practices and other primary healthcare practices with quality data systems and routinely report de-identified performance data.

7.14 **National audit of cardiac rehabilitation services**

**Recommended action:** Fund an audit of cardiac rehabilitation referral and completion rates that will help to identify gaps and opportunities for improvement in existing services.

People who have had a heart attack or who have heart failure should be referred to and complete a cardiac rehabilitation or heart failure program.

Unfortunately, this does not happen often enough, despite strong evidence showing these programs work.

Cardiac rehabilitation and heart failure programs are an essential but underutilised part of recovery from heart attack and/or management of heart disease. It is estimated that attendance rates for cardiac rehabilitation are as low as 11-31%.
Patients with heart disease benefit enormously from participation in these programs and without them they face a substantially higher risk of another heart attack and readmission to hospital.

Cardiac rehabilitation programs guide and support patients to help them recover from heart attack. They encourage lifestyle modification such as quitting smoking, address psychosocial risk factors including depression, and improve medication management and compliance.

Cardiac rehabilitation programs are traditionally centre-based and patients attend them six weeks after they are discharged from hospital. Programs run once a week for six weeks and are typically delivered in outpatient settings in hospitals or community health centres.

Lack of referral to cardiac rehabilitation programs means not enough people receive the support and care they need to return to full health. This means they are at a much greater risk of being readmitted to hospital for further medical treatment.  

Data from the Australian Institute of Health and Welfare shows 55,000 Australians were admitted to hospital in 2009-10 because they had a heart attack. Hospital admissions for heart attack have grown by 64% since 1998-99.  

Each hospital admission for heart attack costs around $25,000 per patient, including more than $18,000 in direct hospital costs. The total cost to the hospital system in Australia is $1.4bn a year.  

A significant part of this cost could be avoided through better access to, and completion of, cardiac rehabilitation. This is because more than one-third (34%) of hospital admissions for heart attack are repeat events. Many patients are readmitted to hospital who have not attended or completed cardiac rehabilitation. It means they miss out on the care they need after their heart attack to maximise their chance of avoiding a future cardiac event.
Disturbingly, studies show the biggest barrier to patients not attending or completing cardiac rehabilitation is lack of referral to a cardiac program.\textsuperscript{58}

**Cardiac rehabilitation is cost-effective**

Cardiac rehabilitation is highly cost-effective and this can be measured in terms of better health and cost savings to the health system. A recent cost-benefit analysis of increasing the uptake of cardiac rehabilitation services found that over a 10-year period net savings of up to $86m could be made in Victoria alone. The greater uptake of cardiac rehabilitation was shown to reduce the burden of disease that directly relate to significant economic and social benefits. Routine referral and implementation of reforms were recommended as important parts of best practice and boosting uptake.\textsuperscript{59}

Another Victorian study showed a 35% increase in five-year survival rates among patients who attended cardiac rehabilitation.\textsuperscript{60} Other studies have shown better outcomes for physical activity, blood lipid levels, medication adherence, healthcare utilisation, social adjustment, smoking reduction and reduced risk of a cardiac event reoccurring.\textsuperscript{61}

A 2013 report by the UK’s National Health Service Improvement agency found that reaching a 65% uptake target of cardiac rehabilitation by eligible patients would result in a 30% reduction in unplanned cardiac readmissions equating to savings of £30.6m a year (A$5m).\textsuperscript{62}

Whether the measure is health or economics, evidence clearly shows cardiac rehabilitation is essential for better outcomes for patients and taxpayers.

7.15 **Monitor Australian stroke quality care and drive targeted quality improvement**

**Recommended action:** Support Australian hospitals to pursue continuous quality improvement by funding a system to regularly monitor and report on stroke care standards.

There is a clear and widely shared understanding of what quality stroke care looks like. It is embodied within the Commission for Safety and Quality in Health Care’s Acute Stroke Clinical Care Standard and recent Federal Government funding to update stroke clinical guidelines will ensure that care recommendations rely on the most up-to-date clinical evidence.

From the data available to us we know that current stroke clinical practice falls well short of our shared definition of high-quality and alarmingly the standard has barely improved in the past two years.

Both the Commission’s Australian Atlas of Health Care Variation report and the 2015 National Stroke Audit (the Audit) have found significant variation in Australian stroke
care. The Audit, which reports on care against indicators from the Acute Stroke Clinical Care Standard, found up to 20,000 patients annually are not getting full benefit from stroke unit care. It also found only 7 percent of patients receive potentially life-saving thrombolysis treatment and support for patients on discharge including secondary prevention medication and care planning continues to be poorly managed. The issues vary from state to state and within states, with no jurisdiction able to claim high quality stroke care is being delivered to all or even most of their patients.

Given the significant burden of stroke in Australia – around 50,000 strokes and 440,000 survivors in the community costing the economy $5 billion – there is significant benefit to be realised from improvement in clinical practice. In order to drive improvement however there must be a system in place to regularly monitor and report on care standards.

Other than the National Stroke Foundation National Stroke Audit, which is conducted every two years, there is no national picture of stroke care quality with extremely limited data collection confined to only some parts of the country.

While we know that hospitals use National Stroke Foundation Audit data to drive targeted improvements we also know that two years between reports is simply too much of a gap to build and sustain a culture of continuous quality improvement.

We recommend government investment in a national stroke care monitoring system that puts the power of continuous quality improvement into the hands of state governments and local hospitals.

A ready-made solution for consistent and efficient data collection exists and is ready to be implemented nationally with appropriate funding support. Implementation would lead to better quality stroke care and ultimately better health outcomes for stroke patients.

Deloitte Access Economics has found potential for 2000 fewer cases of stroke-induced disability and over $50m in economic savings per year if best-practice acute care and rehabilitation was realised in Australia.  

7.16 Biomedical component of the National Health Survey

**Recommended action:** Fund the second phase of the biomedical component of the National Health Survey to assist in planning how best to meet the nation’s healthcare needs.

Fund the second biomedical survey, a key component of the Australian Health Survey. Australia cannot effectively or efficiently tackle the growing burden of chronic
disease if it does not have the data to monitor progress and evaluate interventions. You simply can’t manage what you don’t measure.

To date, much of this data has been provided by the Australian Health Survey (2011-13), with critical biomedical data coming from the National Health Measures Survey, a survey involving 11,000 volunteers.

It is critically important for the National Health Measures Survey to be undertaken every five to six years, providing decision-makers, health professionals and researchers, among many others, the data to understand the health of the nation, the status and impact of key risk factors and the effectiveness of interventions. This will enable scarce resources to be targeted at areas that need attention.

Data derived from the survey provides vital information about cardiovascular disease, liver disease, type 2 diabetes, kidney disease and anaemia, among others, and key risk factors.

The cost of the biomedical survey - around $15m - is insignificant compared to the cost of the chronic disease burden. For example, cardiovascular disease alone costs $7.7bn a year in direct healthcare costs. Failure to invest in the survey, especially the biomedical component, will lead to sub-optimal investment of resources (waste and inefficiency) and poorer health outcomes for Australians.

The first Australian Health Survey has been the most comprehensive health survey ever conducted in this country, collecting key data on issues such as health status, behavioural risk factors (eg smoking, physical inactivity), service use, medications, and the prevalence of biomedical risk factors, such as high blood pressure and high blood cholesterol. It is vital that the survey continues to inform decision-makers to achieve optimal outcomes for the Australian community. Without this data, decision-makers are, to a great extent, flying blind.
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