

Key messages - Hypertension

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Statement of purpose

This document sets out the key messages to promote improvements in the management of hypertension. The document draws upon the following documents:

- *Guideline for the diagnosis and management of hypertension in adults – 2016 (NHF, 2016)*
- *Guidelines for the management of absolute CVD risk (NVDPA, 2012).*

Hypertension and cardiovascular health

Hypertension is an independent risk factor for myocardial infarction, chronic kidney disease, ischaemic and haemorrhagic stroke, heart failure and premature death. Left untreated and/or uncontrolled, hypertension is associated with continuous increases in cardiovascular (CVD) risk, and the onset of vascular and renal damage.

It is well established that in patients with elevated blood pressure, lowering blood pressure reduces cardiovascular events and reduces premature mortality (The Sprint Research Group, 2015., Collins et al., 1994, and Ettehad et al, 2016).

Australian profile

In 2012–13, 6 million Australians (34%) aged 18 years and over were hypertensive, as defined by blood pressure $\geq 140/90$ mmHg, or were taking antihypertensive medication. Of these, more than 4.1 million (68%) had uncontrolled or untreated hypertension. The proportion of Australians with untreated or uncontrolled hypertension was greater in men than women (24.4% versus 21.7%), and was shown to increase with age peaking at 47% in individuals over 75 years of age (ABS, 2015).

The prevalence of hypertension has also been associated with lower household income and residing within regional areas of Australia (NHF, 2011). While approximately one-third of the

Australian population have been told by a doctor that they have high blood pressure, only half are reported to be taking their prescribed medication.

Aboriginal and Torres Strait Islander peoples have a greater prevalence of risk factors for CVD and have a higher risk of premature cardiovascular events (by absolute CVD risk assessment). In 2012–2013, at least 25% of Aboriginal and Torres Strait Islander adults were estimated to have untreated or uncontrolled hypertension (ABS, 2013).

Diagnosis

The evaluation of blood pressure and the diagnosis of hypertension should include blood pressure measurements, medical history, physical examination, assessment of absolute CVD risk (where appropriate), laboratory investigations and further diagnostic tests when required. If clinic blood pressure is $\geq 140/90$ mmHg, or hypertension is suspected, ambulatory and/or home monitoring should be offered to confirm the blood pressure level (NHFA, 2016).

A standardised protocol containing resources for Australian patients and doctors on how to assess home blood pressure has been developed (Sharman et al, 2015). A list of validated devices is available at www.bhsoc.org.

Management

Absolute CVD risk assessment

It is now well accepted that the management of patients with hypertension should also consider the individual's absolute CVD risk. The concept of absolute CVD risk is based on the following:

- Individuals with hypertension often present with additional risk factors that are modifiable (e.g. blood lipids, diabetes, smoking) and non-modifiable (e.g. age, sex, ethnicity).
- The combined effect of multiple risk factors results in a CVD risk that is greater than the sum of its individual components. As a result, moderate reductions in several risk factors may be more effective in reducing overall risk than a major reduction in one risk factor.
- Treatment strategies for individuals at high absolute risk of a cardiovascular event may differ from those at low absolute CVD risk despite presenting with similar blood pressure readings.

The absolute CVD risk assessment is primarily designed for primary prevention in Australian adults >45 years of age or for Aboriginal and Torres Strait Islander peoples >35 years of age with no known CVD. Those with persistently elevated blood pressure $\geq 180/110$ mmHg or those with target organ damage already have a high absolute CVD risk, and therefore calculation is not necessary. The risk assessment algorithm and treatment options are not appropriate for people with known CVD (e.g. those with established vascular disease, including prior myocardial infarction, prior stroke and/ or transient ischaemic attacks, peripheral arterial disease, end-stage kidney disease, heart failure, atrial fibrillation or aortic disease, >70 years of age).

Lifestyle advice

Lifestyle advice is recommended for all patients with hypertension. Trials using lifestyle interventions in patients with hypertension have shown reductions in blood pressure and a reduction in combined cardiovascular events and total mortality (Eriksson et al., 2009. Folta et al., 2009, Wister et al., 2007).

A detailed guide on how to work with patients on lifestyle risk factors of smoking, nutrition, alcohol and physical activity is available from the Royal Australian College of General Practitioners (2015).

There is strong epidemiological evidence that regular physical activity and moderate to high levels of cardiorespiratory fitness provide protection against hypertension and all-cause mortality in both normotensive and hypertensive individuals (Blair et al., 1996, Church et al, 2001, Williams et al, 2013). Regular aerobic exercise has been shown to lower daytime systolic and diastolic blood pressure by up to 3.2 mmHg and 2.7 mmHg, respectively, without affecting night-time blood pressure (Cornelissen et al., 2013). For patients with hypertension it is also recommended that training be postponed if resting blood pressure is poorly controlled ($\geq 180/110$ mmHg) (Sharman and Stowasser, 2009).

There is evidence that weight loss is associated with a reduction in blood pressure with 2 kilograms weight loss resulting in clinically meaningful reduction in blood pressure (NHMRC, 2013).

In a review of 167 studies, a low sodium intake was found to be associated with an average reduction in systolic blood pressure of 5.8 mmHg and 10.21 mmHg in patients with hypertension from Caucasian and Asian populations respectively (Graudal et al., 2012). For patients with normal renal function, increasing dietary potassium can reduce systolic blood pressure by 4-8 mmHg in patients with hypertension (NHFA, 2006). Patients taking potassium-sparing diuretics must limit potassium intake to avoid severe hyperkalaemia.

Consumption of ≥ 2 standard drinks a day for men and ≥ 1 standard drink a day for women has been found to increase the risk of developing hypertension (Taylor et al., 2009).

There is no evidence that consumption of fat is directly associated with the development of hypertension.

Smoking cessation has been shown to reduce overall CVD risk (Gratziou C, 2009).

Overall relaxation interventional studies do not provide convincing evidence of blood pressure reduction (Dickinson et al., 2008).

Recommendations for treatment (NHFA, 2016)

- For patients at low absolute CVD risk ($<10\%$ 5-year risk) with persistent blood pressure $\geq 160/100$ mmHg antihypertensive therapy should be started.
- For patients at moderate absolute CVD risk ($10\text{--}15\%$ 5-year risk) with persistent blood pressure ≥ 140 mmHg and/or ≥ 90 mmHg antihypertensive therapy should be started.
- Once decided to treat, patients with uncomplicated hypertension should be treated to a target of $<140/90$ mmHg or lower if tolerated.
- In selected high cardiovascular risk populations where a more intense treatment can be considered, aiming to a target of <120 mmHg systolic blood pressure can improve cardiovascular outcomes.
- In selected high cardiovascular risk populations where a treatment is being targeted to <120 mmHg systolic, close follow-up of patients is recommended to identify treatment

related adverse effects including hypotension, syncope, electrolyte abnormalities and acute kidney injury.

- In patients with uncomplicated hypertension ACE inhibitors or ARBs, calcium channel blockers, and thiazide diuretics are all suitable first-line antihypertensive drugs, either as monotherapy or in some combinations unless contraindicated.
- The balance between efficacy and safety is less favourable for beta-blockers than other first-line antihypertensive drugs. Thus beta-blockers should not be offered as a first-line drug therapy for patients with hypertension not complicated by other conditions.
- ACE inhibitors and ARBs are not recommended in combination due to the increased risk of adverse effects.

The selected high cardiovascular risk populations include those with: clinical or subclinical cardiovascular disease other than stroke (see table 1 below), chronic kidney disease, Framingham risk score for 10 year cardiovascular risk $\geq 15\%$ or ≥ 75 years of age.

Table 1: Selected high risk populations

Clinical	Subclinical
Previous myocardial infarction, percutaneous coronary intervention, coronary artery bypass grafting, carotid endarterectomy, carotid stenting	Coronary artery calcium score ≥ 400 Agatston units within the past 2 years
Peripheral arterial disease with revascularisation	Ankle brachial index (ABI) ≤ 0.90 within the past two years
Acute coronary syndrome with or without ECG change, ECG changes on a graded exercise test (GXT) or positive cardiac imaging study	Left ventricular hypertrophy (LVH) by ECG (based on computer reading), echocardiogram report, or other cardiac procedure report within the past two years
At least a 50% diameter stenosis of a coronary, carotid or lower extremity artery	
Abdominal aortic aneurysm (AAA) $\geq 5\text{cm}$ with or without repair	

More intense treatment targets

While it is becoming increasingly apparent that certain patients may benefit from being treated to optimal blood pressures targets, it is currently difficult to broaden this recommendation to all patients due to the limited populations studied and the lack of long-term adverse effects data. The best clinical trial evidence is the SPRINT study (The SPRINT Research Group, 2015), but a number of considerations related to the study population and methods do not yet provide confidence that a target systolic blood pressure of 120 mmHg can be applied to everyone with hypertension.

The selection of a blood pressure target should be based on an informed, shared decision-making process between patient and doctor (or healthcare provider) considering the benefits and harms, and reviewed on an ongoing basis. The following issues should be considered:

- Much of the evidence supporting the treatment to optimal blood pressure (120 mmHg systolic) is derived from patients with existing co-morbidities or already receiving antihypertensive therapy.
- Aiming for a systolic blood pressure target of 120 mmHg may be inherently difficult in patients with high baseline pressures and where attaining 140 mmHg is already presenting a challenge.
- Much of the evidence for lower treatment targets is based on systolic blood pressure. There is general support for diastolic blood pressure to be <90 mmHg.
- For patients that have a long history of hypertension, achieving a systolic blood pressure of 120 mmHg may be inherently difficult.
- The mean reduction in systolic blood pressure in SPRINT was 18 mmHg, thus the benefit over harms for achieving a systolic blood pressure of 120 mmHg in patients with more severe grades of hypertension remains uncertain.
- That the effect of intensive treatment in patients <50 years of age has not been directly tested.
- SPRINT used automated office blood pressure measurement (i.e. the patient was alone in a room while three measurements were taken with an automated device). This blood pressure measurement technique generally yields lower blood pressure readings than those obtained by conventional clinic blood pressure and is more akin to out of office measurements.
- The SPRINT trial did not include patients with diabetes and, while ACCORD (ACCORD Study Group et al., 2010) found intensive treatment reduced the risk of stroke, there was no improvement in all-cause mortality.
- SPRINT included patients assessed as high cardiovascular risk using algorithm that slightly differs from the Australian absolute CVD risk algorithm at www.cvdcheck.org.au.

Key messages

Consumers

High Blood pressure is one of the most common disorders affecting the heart and blood vessels.
High blood pressure is one of the main risk factors for heart, stroke, kidney and blood vessel disease.
High blood pressure rarely gives warning signs. To find out if you have high blood pressure, you should have your blood pressure measured regularly.
Your family history, eating patterns, alcohol intake, weight and level of physical activity have a strong influence on your blood pressure.
Many people will need to take blood pressure-lowering medicine to reduce their high blood pressure. You can work closely with your doctor to find the medicine that works best for you.
Even if you take medicine to manage your blood pressure, it is still important that you make changes to your lifestyle to help reduce your blood pressure.
To help to lower your blood pressure, it is important that you: <ul style="list-style-type: none">• maintain a healthy body weight – you can check your body weight by using the Body Mass Index (BMI) calculator found on the Heart Foundation website http://heartfoundation.org.au/your-heart/know-your-risks/healthy-weight/bmi-calculator. You can also check your waist circumference – target of <94cm in men, <90cm in Asian men and <80cm in women.• be physically active every day – 30 minutes of moderate physical activity such as brisk walking is recommended on all or most days of the week• limit your alcohol intake – not more than two standard drinks per day for men and 1 standard drink per day for women• decrease your salt/sodium intake – most salt is hidden in processed foods such as bread, meat, poultry (especially processed meat), some cereal products, biscuits and pasta.• increase your potassium intake through what you eat such as fruit, vegetables, legumes (chick peas, lentils, baked and kidney beans, and plain unsalted nuts).
Being a non-smoker reduces your risk of developing problems with your heart and blood vessels – call the Quitline on 13 78 48 or go to http://www.quitnow.gov.au/

General practitioners and practice nurses

<p>Despite strong evidence regarding the benefits of controlling hypertension and the large number of available therapies, controlling raised blood pressure and CVD risk in individual patients and at a population level remains a large national challenge.</p>
<p>Lowering blood pressure by only 1–2 mmHg within a population is known to markedly reduce cardiovascular morbidity and mortality (Stamler et al., 1989 and Verdecchia et al., 2010).</p>
<p>If clinic blood pressure is $\geq 140/90$ mmHg, or hypertension is suspected, ambulatory and/or home monitoring should be offered to confirm the blood pressure level (NHFA, 2016).</p>
<p>A standardised protocol containing resources for Australian patients and doctors on how to assess home blood pressure has been developed (Sharman et al, 2015).</p>
<p>The absolute CVD risk assessment is primarily designed for primary prevention in Australian adults >45 years of age or for Aboriginal and Torres Strait Islander peoples >35 years of age with no known CVD. The risk assessment algorithm and treatment options are not appropriate for people with known CVD (e.g. those with established vascular disease, including prior myocardial infarction, prior stroke and/ or transient ischaemic attacks, peripheral arterial disease, end-stage kidney disease, heart failure, atrial fibrillation or aortic disease).</p>
<p>Lifestyle advice is recommended for all patients with hypertension. Trials using lifestyle interventions in patients with hypertension have shown reductions in blood pressure and a reduction in combined cardiovascular events and total mortality (Eriksson et al., 2009. Folta et al., 2009, Wister et al., 2007).</p>
<p>Once decided to treat, patients with uncomplicated hypertension should be treated to a target of $<140/90$ mmHg or lower if tolerated (NHFA, 2016).</p>
<p>In selected high cardiovascular risk populations where a more intense treatment can be considered, aiming to a target of <120 mmHg systolic blood pressure can improve cardiovascular outcomes (NHFA, 2016). The selected high cardiovascular risk populations include those with: clinical or subclinical cardiovascular disease other than stroke, chronic kidney disease, Framingham risk score for 10-year cardiovascular risk $\geq 15\%$ or ≥ 75 years of age (The SPRINT Group, 2015).</p>
<p>In selected high cardiovascular risk populations where a treatment is being targeted to <120 mmHg systolic, close follow-up of patients is recommended to identify treatment related adverse effects including hypotension, syncope, electrolyte abnormalities and acute kidney injury (NHFA, 2016).</p>

Policy makers

<p>In 2012–13, 6 million Australians (34%) aged 18 years and over were hypertensive, as defined by blood pressure $\geq 140/90$ mmHg, or were taking antihypertensive medication. Of these, more than 4.1 million (68%) had uncontrolled or untreated hypertension.</p>
<p>Vascular events associated with hypertension are a significant burden to the Australian healthcare system. CVD has the highest level of healthcare expenditure of any disease group, with direct costs at \$7.7 billion in 2008–2009, an increase of 48% from 2000–2001 (NHFA, 2014). Patients admitted to hospital are the most expensive component of healthcare expenditure accounting for \$4.52 billion, followed by prescriptions at \$1.68 billion.</p>
<p>Despite strong evidence regarding the benefits of controlling hypertension and the large number of available therapies, controlling raised blood pressure and CVD risk in individual patients and at a population level remains a large national challenge. Findings suggest that controlled blood pressure is associated with lower risk of stroke, coronary heart disease, chronic kidney disease, heart failure and death.</p>
<p>Hypertension is a significant determinant of an individual's overall cardiovascular risk. Lowering blood pressure by only 1–2 mmHg within a population is known to markedly reduce cardiovascular morbidity and mortality (Stamler et al., 1989 and Verdecchia et al., 2010).</p>
<p>Trials using lifestyle interventions in patients with hypertension have shown reductions in blood pressure and a reduction in combined cardiovascular events and total deaths (Eriksson et al., 2009. Folta et al., 2009, Wister et al., 2007).</p>
<p>Modifying lifestyle factors can effectively delay or prevent the onset of hypertension, contribute to the reduction of blood pressure in treated patients with hypertension and, in some cases, may reduce or abolish the need for antihypertensive therapy.</p>

Frequently asked questions (FAQs)

Why have these guidelines been developed?

Hypertension is the major risk factor for premature death and disability from cardiovascular disease in Australia and globally (AIHW, 2016). The management of hypertension is also an area where the evidence is changing rapidly. The *Guideline for the diagnosis and management of hypertension in adults – 2016* updates the previous *Guide to management of hypertension (2008 version) – updated 2010* with new evidence regarding out-of-clinic blood pressure, white coat hypertension, blood pressure variability and the management of hypertension in the presence of comorbidities such as chronic kidney disease, diabetes and prior stroke and/or transient ischaemic attack. This is particularly relevant given the ageing population and the complexity of management in the presence of other health problems.

Who was involved in the process of developing the guideline?

The National Blood Pressure and Vascular Disease Advisory Committee (NBPVDAC), an expert committee of the National Heart Foundation of Australia, developed the new Guideline. Committee members were selected based on their recognised expertise or were nominated to represent professional organisations. The following organisations nominated representatives to participate in the committee: Royal Australian College of General Practitioners (RACGP), National Stroke Foundation, Kidney Health Australia, Hypertension Nurses Australia, National Prescribing Service Medicinewise and the High Blood Pressure Research Council of Australia.

For whom was the guideline developed?

The Guideline has been developed to guide healthcare professionals working across the Australian healthcare system, particularly those working within primary care and community services, with the latest evidence for controlling blood pressure, including methods for diagnosis and monitoring, and effective treatment strategies for patients with hypertension with and without co-morbidities

How does this Guideline differ from the previous guideline?

In contrast to the former *Guide to management of hypertension, 2008 version (updated 2010)* this guideline provides description of recent evidence rated according to the *National Health and Medical Research Council levels of evidence* (NHMRC, 2009). The former guideline was predominantly focused on primary prevention. However, this latest guideline includes both a primary and secondary prevention focus on the contemporary management of hypertension in the context of an ageing population with increasing complexities.

For primary prevention, the emphasis in the guideline is on targeting absolute risk, preferably assessed using the methodology of the NVDPA guideline (NVDPA, 2012). However, this approach is limited to particular age groups (> 35 in aboriginal and Torres Strait Island people, > 45 in other Australians) and does not always account for important comorbidities, or target organ damage in hypertension that are known to increase risk. It has therefore been necessary to make recommendations based on recent evidence outside the patient groups covered by the absolute

risk guidelines. Furthermore, a number of important recent trials have addressed blood pressure targets as a single risk factor in people with moderate or high risk assessed by other methods.

The new Guideline offers advice on new areas including out-of-clinic blood pressure measurement using ambulatory or home procedures, white coat hypertension and blood pressure variability. Furthermore, there has been considerable development of treatment strategies and targets according to selected co-morbidities which often do not occur in isolation but in combination. These include stroke and TIA, chronic kidney disease, diabetes, myocardial infarction, chronic heart failure, peripheral artery disease, and obstructive sleep apnoea.

An additional key difference is the new evidence for a target blood pressure of <120 mmHg in particular patient groups. In selected high cardiovascular risk populations, there is a recommendation to aim for this lower target with close follow-up to identify adverse effects including hypotension, syncope, electrolyte abnormalities and acute kidney injury.

What is the new advice on out of clinic blood pressure measurement using ambulatory or home procedures?

Hypertension should be confirmed through out of clinic blood pressure measurement. Procedures for ambulatory blood pressure monitoring should be specifically explained to patients to ensure that the monitoring is accurate. Those undertaking home measurements require appropriate training under professional supervision. Treatments should only be based on ambulatory or home based monitoring as they are stronger predictors of outcomes.

What is the new advice on white coat hypertension?

White coat hypertension is a condition in blood pressure measured in a clinical setting is usually at hypertensive levels but measured in non-clinical setting is usually normal. More frequent monitoring of people with white coat hypertension is necessary as these people can progress to sustained hypertension and a higher risk of cardiovascular disease.

What is the new advice on blood pressure variability?

We now know that blood pressure varies greatly over the day and for a variety of reasons ie pain, stress, presence of medical staff and it is necessary to account for sources of variation to improve the accuracy of the measurement. It is now recommended that ambulatory and/or home monitoring should be offered to confirm the blood pressure level before treatment is commenced.

Why is <120 mmHg the target blood pressure in particular patient groups?

There is new evidence that lower targets in some patient groups result in less heart and blood vessel events such as heart attack and stroke. Lower targets require closer monitoring to identify treatment related adverse effects such as low blood pressure, fainting and problems with the kidney.

The selected high cardiovascular risk populations include those with: clinical or subclinical cardiovascular disease other than stroke (see table 1 below), chronic kidney disease, Framingham risk score for 10 year cardiovascular risk $\geq 15\%$ or ≥ 75 years of age.

Table 1: Selected high risk populations (SPRINT)

Clinical	Subclinical
Previous myocardial infarction, percutaneous coronary intervention, coronary artery bypass grafting, carotid endarterectomy, carotid stenting	Coronary artery calcium score ≥ 400 Agatston units within the past 2 years
Peripheral arterial disease with revascularisation	Ankle brachial index (ABI) ≤ 0.90 within the past two years
Acute coronary syndrome with or without ECG change, ECG changes on a graded exercise test (GXT) or positive cardiac imaging study	Left ventricular hypertrophy (LVH) by ECG (based on computer reading), echocardiogram report, or other cardiac procedure report within the past two years
At least a 50% diameter stenosis of a coronary, carotid or lower extremity artery	
Abdominal aortic aneurysm (AAA) ≥ 5 cm with or without repair	

Why are there differences between the Guideline and other guidelines?

The key guidelines that make recommendations around blood pressure targets and management are: *National Evidence-Based Guideline on Secondary Prevention of Cardiovascular Disease in Type 2 Diabetes* (Baker IDI Heart and Diabetes Institute, 2015), *Guidelines for the management of absolute cardiovascular risk* (NVDPA, 2012) and *Reducing risk of heart disease: an expert guide to clinical practice for secondary prevention of coronary heart disease* (NHFA, 2012). The Guideline differs from other guidelines due to recent evidence outside the patient groups covered by the *Guidelines for the management of absolute cardiovascular risk* (NVDPA, 2012) as well as new trials addressing blood pressure as a single risk factor in people with moderate or high risk measured using a variety of methods.

What are the differences between the Guideline and other guidelines?

The differences related to targets (Table 2) and treatment strategies (Table 3) are detailed below.

Table 2: Targets

	Heart Foundation Hypertension	Absolute CVD risk	Secondary prevention of Coronary Heart Disease	Secondary Prevention of CVD in Type 2 Diabetes
General target	<140/90 lower if tolerated	≤140/90	NA	NA
CVD	<140/90 Peripheral Vascular Disease	NA	<130/80 CHD	≤130/80
Diabetes	<140/90	≤130/80	NA	≤130/80
CKD	<140/90 lower if tolerated	≤140/90	NA	NA
Micro/Macro albuminuria		≤130/80	NA	NA

NA = Not applicable

Table 3: Treatment strategies

	Heart Foundation Hypertension	Absolute CVD risk
Low absolute CVD risk	If BP persistently ≥160/100, give lifestyle advice and start BP treatment	If BP persistently ≥160/100, give lifestyle advice and start BP treatment
Moderate absolute CVD risk	If BP 140-159, give lifestyle advice and review in 2 months	
	If BP persistently ≥160/100 or SBP 140-159 or DBP 90-99, give lifestyle advice and start treatment	If BP persistently ≥160/100, give lifestyle advice and start treatment
	If SBP 130-139 or DBP 85-90, review in 2 months	If <160/100, give lifestyle advice and review 3-6 months; consider BP treatment if no change
High absolute CVD risk	Start BP treatment	Start BP treatment

How is hypertension knowledge rapidly changing?

As hypertension is a significant cause of cardiovascular disease, researchers are constantly working to expand our understanding of hypertension so that we can improve treatments. Over the last five years there has been new evidence regarding the variability of blood pressure measurement over the day and in particular situations such as following eating, emotional state, exercise and sleep. We now know that before commencing medication treatment, it is important to have an accurate picture of an individual's blood pressure over the day. It is now recommended that ambulatory and/or home monitoring should be offered to confirm the blood pressure level before treatment is commenced.

Another key area of knowledge change is in aiming for lower blood pressure targets in people with specific conditions and people over the age of 75 years. This recommendation is based on a study published in late 2015 which shows that the evidence is constantly evolving and needs updating.

How will these guidelines evolve with the rapid changes in evidence?

The National Heart Foundation of Australia is always looking at new evidence to keep clinicians up to date with changes to practice. These guidelines will be updated with special addendums as the evidence changes and will be updated more fully when this is needed.

Which organisations have endorsed the Guideline?

Kidney Health Australia, National Stroke Foundation and the High Blood Pressure Research Council of Australia have endorsed the Guideline. The RACGP have recommended the Guideline for approval as an Accepted Clinical Resource.

Heart Foundation resources

Presentation - *Guideline for the diagnosis and management of hypertension in adults 2016*

Consumer resources

- Managing high blood pressure – 2016 update
- Self-measurement of blood pressure – 2016 update

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About this document	
Key contacts	Luke Andrews
Development	Leonie Scott
Approval	Garry Jennings
Publication	11 July 2016
Date of next review	11 July 2017