

Hypertension

Implementing NICE guidance

August 2011

NICE clinical guideline 127



Updated guidance

This guideline updates and replaces ‘Hypertension: management of hypertension in adults in primary care’ (NICE clinical guideline 34, 2006).

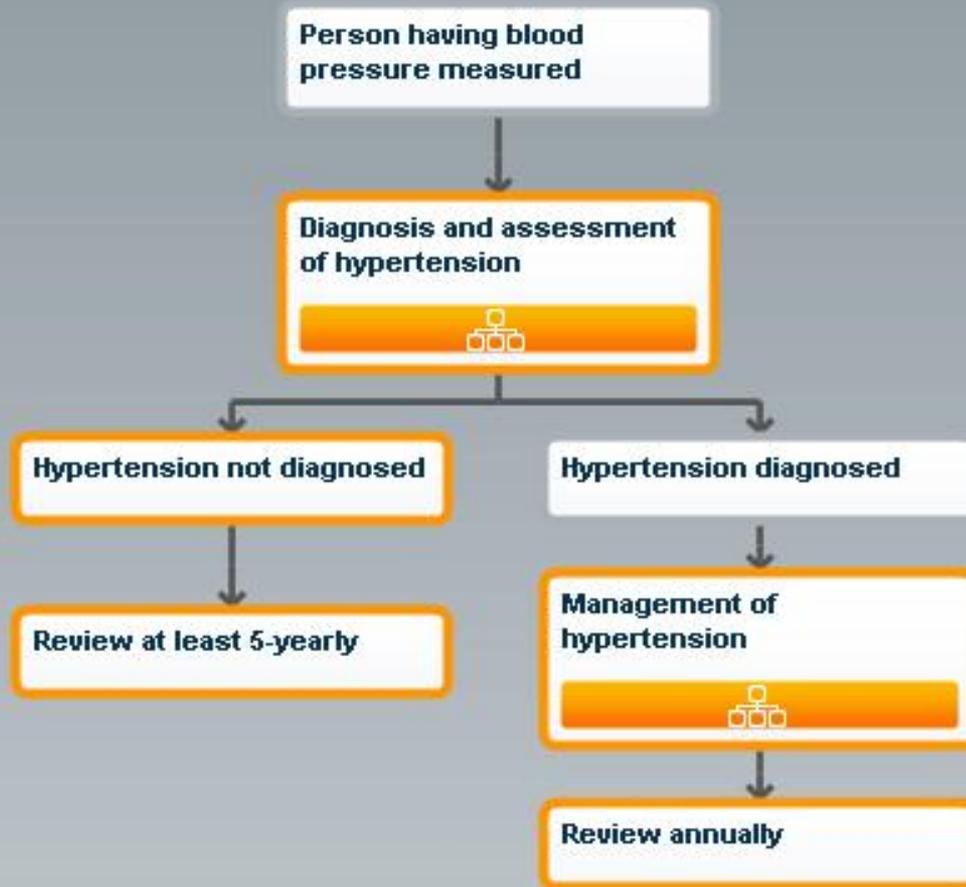
NICE clinical guideline 34 was a partial update of ‘Hypertension’ (NICE clinical guideline 18, 2004).

This update was produced in collaboration with the British Hypertension Society



Hypertension overview

Hypertension ▾



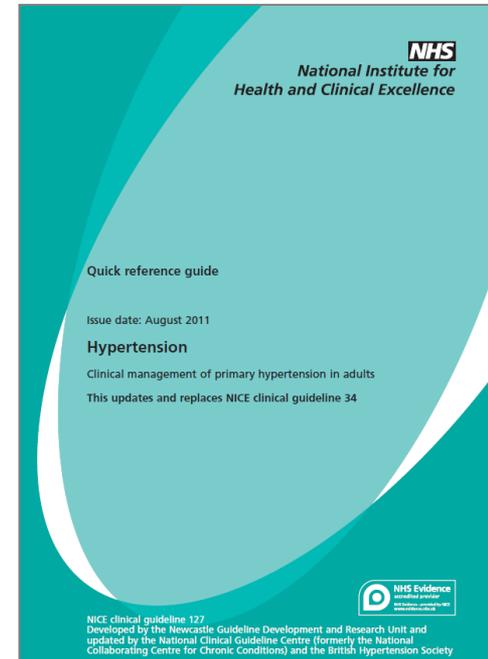
NICE Pathway

The NICE Hypertension pathway shows all the recommendations in the Hypertension guideline

[Click here to go to NICE Pathways website](#)

What this presentation covers

- Background
- Scope
- Key priorities for implementation and updated areas
- Areas not updated
- Costs and savings
- Discussion
- Find out more



Background

High Blood Pressure:

- Major risk factor for stroke, myocardial infarction, heart failure, chronic kidney disease, cognitive decline and premature death.
- Untreated hypertension can cause vascular and renal damage leading to a treatment-resistant state.
- Each 2 mmHg rise in systolic blood pressure associated with increased risk of mortality:
 - 7% from heart disease
 - 10% from stroke.

Epidemiology

- Hypertension is common in the UK population.
- Prevalence influenced by age and lifestyle factors.
- 25% of the adult population in the UK have hypertension.
- 50% of those over 60 years have hypertension.
- With an ageing population, the prevalence of hypertension and requirement for treatment will continue to increase.

Definitions

Stage 1 hypertension:

- Clinic blood pressure (BP) is 140/90 mmHg or higher **and**
- ABPM or HBPM average is 135/85 mmHg or higher.

Stage 2 hypertension:

- Clinic BP 160/100 mmHg is or higher **and**
- ABPM or HBPM daytime average is 150/95 mmHg or higher.

Severe hypertension:

- Clinic BP is 180 mmHg or higher **or**
- Clinic diastolic BP is 110 mmHg or higher.

Scope



Clinical management of primary hypertension in adults who may, or may not, have pre-existing cardiovascular disease.

Groups not included are people with diabetes, secondary causes of hypertension, accelerated hypertension or acute hypertension, pregnant women, and children and young people aged under 18.

Key priorities for implementation

- Diagnosis.
- Initiating and monitoring antihypertensive drug treatment.
- Choosing antihypertensive drug treatment.

Diagnosis (1)

If the clinic blood pressure is 140/90 mmHg or higher, offer ambulatory blood pressure monitoring (ABPM) to confirm the diagnosis of hypertension.

Diagnosis (2)

When using the following to confirm diagnosis, ensure:

ABPM:

- at least two measurements per hour during the person's usual waking hours, average of at least 14 measurements to confirm diagnosis

HBPM:

- two consecutive seated measurements, at least 1 minute apart
- blood pressure is recorded twice a day for at least 4 days and preferably for a week
- measurements on the first day are discarded – average value of all remaining is used.

Initiating drug treatment

Offer antihypertensive drug treatment to people:

- who have stage 1 hypertension, are aged under 80 and meet identified criteria
- who have stage 2 hypertension at any age.

If aged under 40 with stage 1 hypertension and without evidence of target organ damage, cardiovascular disease, renal disease or diabetes, consider:

- specialist evaluation of secondary causes of hypertension
- further assessment of potential target organ damage.

Monitoring drug treatment (1)

Use clinic blood pressure measurements to monitor response to treatment. Aim for target blood pressure below:

- 140/90 mmHg in people aged under 80
- 150/90 mmHg in people aged 80 and over

Monitoring drug treatment (2)

For people identified as having a 'white-coat effect' consider ABPM or HBPM as an adjunct to clinic blood pressure measurements to monitor response to treatment.

Aim for ABPM/HBPM target average of:

- below 135/85 mmHg in people aged under 80
- below 145/85 mmHg in people aged 80 and over.

White-coat effect: a discrepancy of more than 20/10 mmHg between clinic and average daytime ABPM or average HBPM blood pressure measurements at the time of diagnosis.

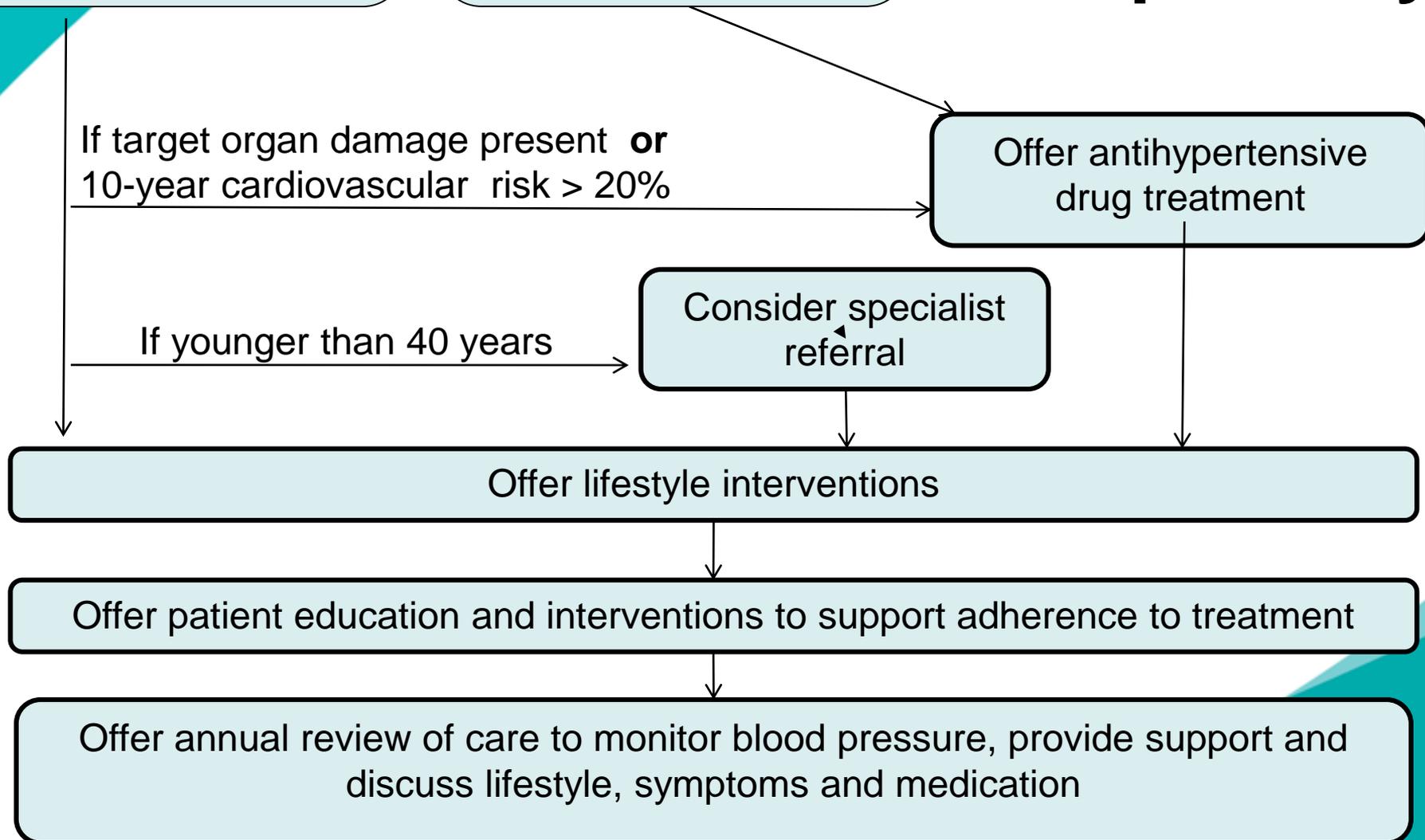
CBPM $\geq 140/90$ mmHg
& ABPM/ HBPM
 $\geq 135/85$ mmHg

Stage 1 hypertension

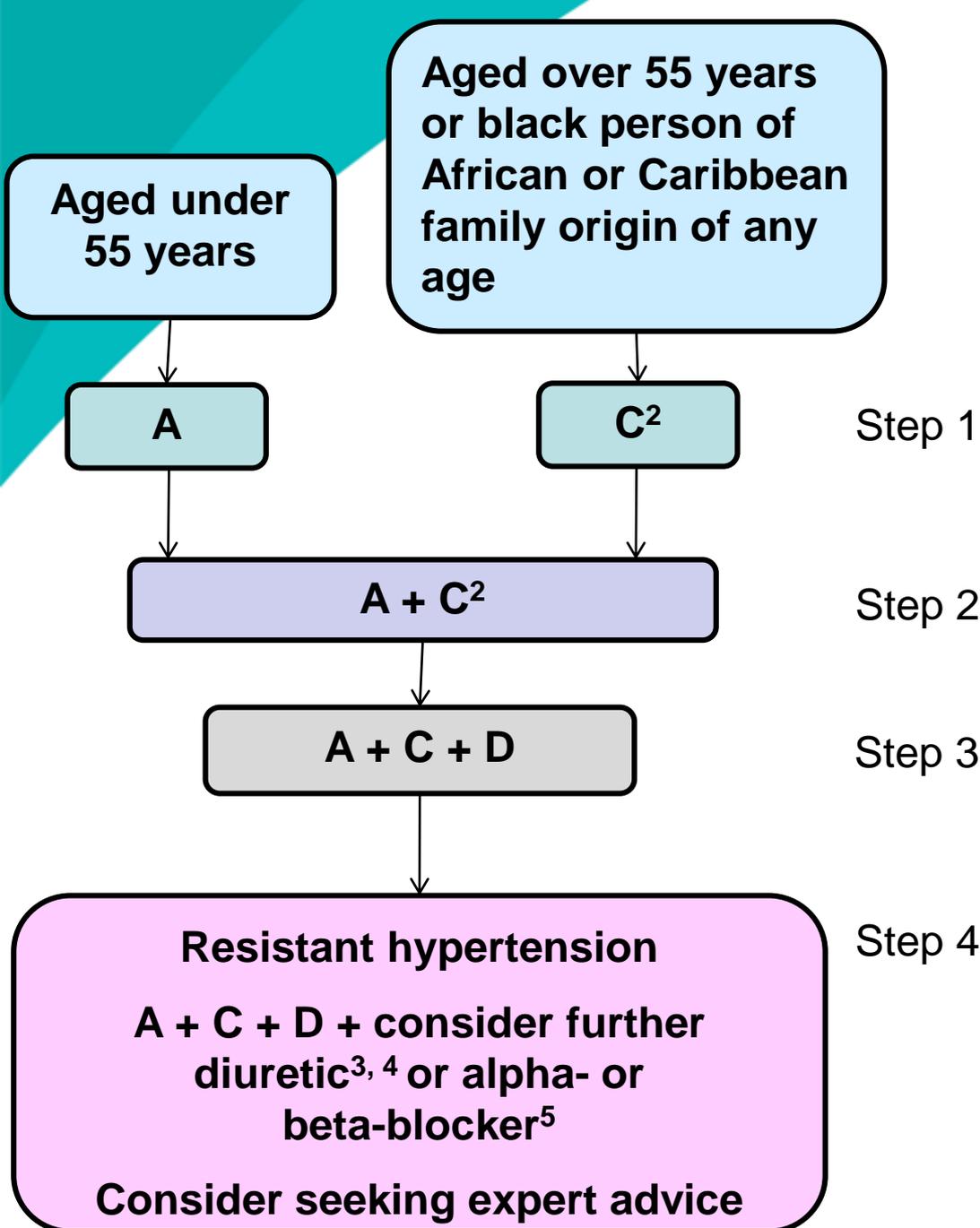
CBPM $\geq 160/100$ mmHg
& ABPM/ HBPM
 $\geq 150/95$ mmHg

Stage 2 hypertension

Care pathway



Summary of antihypertensive drug treatment



Key

A – ACE inhibitor or low-cost angiotensin II receptor blocker (ARB)¹

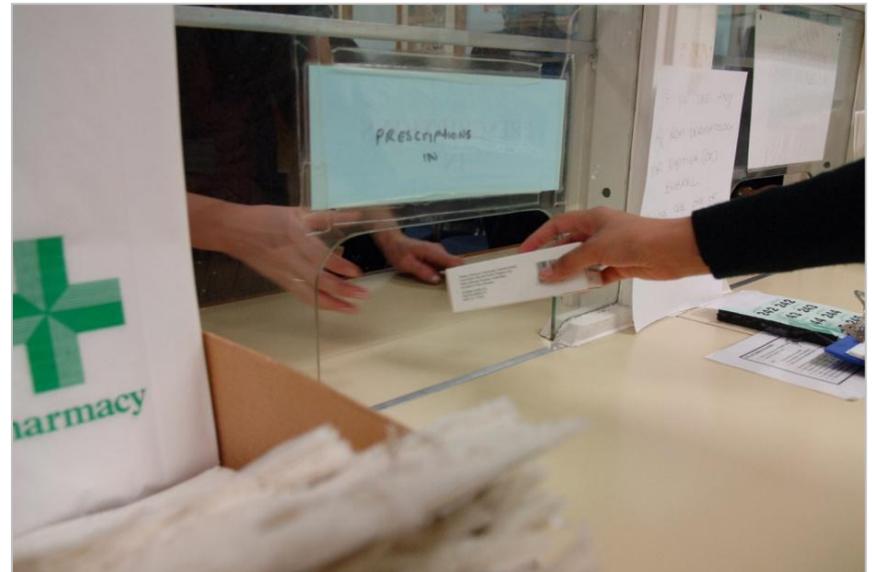
C – Calcium-channel blocker (CCB)

D – Thiazide-like diuretic

Drug treatment

Choosing antihypertensive drug treatment

Offer people aged 80 and over the same antihypertensive drug treatment as people aged over 55, taking into account any comorbidities.



Measuring blood pressure: updated recommendations

Standardise the environment and provide a relaxed, temperate setting with the person quiet and seated.

When using an automated device:

- palpate the radial or brachial pulse before measuring blood pressure. If pulse is irregular measure blood pressure manually
- ensure that the device is validated* and an appropriate cuff size for the person's arm is used.



* See notes

Assessing cardiovascular risk and target organ damage: updated recommendations

Use a formal estimation of cardiovascular risk to discuss prognosis and healthcare options with people with hypertension.

For all people with hypertension offer to:

- test urine for presence of protein
- take blood to measure glucose, electrolytes, creatinine, estimated glomerular filtration rate and cholesterol
- examine fundi for hypertensive retinopathy
- arrange a 12-lead ECG.

Additional recommendations

Lifestyle interventions

Offer guidance and advice about:

- diet (including sodium and caffeine intake) and exercise
- alcohol consumption
- smoking.

Patient education and adherence

Provide:

- information about benefits of drugs and side effects
- details of patient organisations
- an annual review of care.

Costs and savings for total population of England

Costs and savings of using ABPM to confirm diagnosis of hypertension

Year	Change in diagnosis cost (£m)	Change in treatment cost (£m)	Net resource impact (£m)
Year 1	£5.1	- £2.5	£2.6
Year 2	£5.1	- £5.8	- £0.7
Year 3	£5.1	- £9.1	- £4.0
Year 4	£5.1	-£12.4	- £7.3
Year 5	£5.1	-£15.7	-£10.5

Discussion

- How do our diagnosis and treatment pathways for people with hypertension need to change in order to bring them in line with this guidance?
- What innovative ways can we think of to enhance our capacity to deliver ABPM to people who need it?
- What action do we need to take to ensure our blood pressure monitoring devices are properly validated, maintained and regularly calibrated?
- Who within our team needs briefing or training to ensure consistent implementation?

NHS Evidence

Visit NHS Evidence for the best available evidence on all aspects of cardiovascular disease

The screenshot displays the NHS Evidence website interface. At the top, there is a navigation bar with links for 'My Evidence', 'Register', and 'Journals and Databases'. A search bar contains the term 'Hypertension'. The main content area features a sidebar on the left with a 'Introduction' link. The main text area is titled 'Hypertension: Introduction' and includes a feedback link. The text describes hypertension as a 'silent killer' and provides information on its prevalence and measurement. A source citation is provided: 'Source: NHS Choices, 23 Apr 2010'. The bottom of the page shows a 'Filter by' section with a breadcrumb trail 'Home » Topics » Hypertension', a sorting option 'Results are currently sorted by relevance (Sort results by: date)', and a 'Save & Share' section with options like 'Save this search', 'Save all results', 'Email to a colleague', and 'Rate these results'.

My Evidence | Register | Journals and Databases

Hypertension

NHS Evidence

Close

> Introduction

Hypertension: Introduction [Feedback](#)

Source: *NHS Choices, 23 Apr 2010*

Known as the 'silent killer', high blood pressure rarely has obvious symptoms.

Around 30% of people in England have high blood pressure but many don't know it. If left untreated, high blood pressure increases your risk of a heart attack or stroke.

The only way of knowing there is a problem is to [have your blood pressure measured](#).

All adults should have their blood pressure checked at least every five years. If you haven't had yours measured, or you don't know what your blood pressure reading is, ask your GP to check it for you.

What is high blood pressure?

Blood pressure measures how strongly blood presses against the walls of your arteries (large blood vessels) as it is pumped around your body by your heart. If this pressure is too high it puts a strain on your arteries and your heart, which makes it more likely that you will suffer a [heart attack](#), a [stroke](#) or [kidney disease](#).

Blood pressure is measured in millimetres of mercury (which is written as mmHg) and it is recorded as two figures:

Guidance

Ongoing Research

Filter by

Home » Topics » Hypertension

Results are currently sorted by **relevance** (Sort results by: [date](#)) Results 1 - 10 (of 18774)

Save & Share

Save this search

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Rate these results

CG107 [Hypertension in pregnancy: full guideline](#)  ...and Children's Health **Hypertension** in pregnancy: the management...hypertensive disorders during pregnancy **Hypertension** in pregnancy the management...Management of pregnancy with chronic

Click here to go to the NHS Evidence website

Find out more

Visit www.nice.org.uk/guidance/CG127 for:

- the guideline
- the quick reference guide
- 'Understanding NICE guidance'
- costing report and template
- audit support
- baseline assessment tool
- clinical case scenarios
- implementation advice
- podcast

Visit <http://pathways.nice.org.uk/pathways/hypertension> to access the hypertension NICE pathway (see slide 3)



What do you think?

Did the implementation tool you accessed today meet your requirements, and will it help you to put the NICE guidance into practice?

We value your opinion and are looking for ways to improve our tools. Please complete this [short evaluation form](#).

If you are experiencing problems accessing or using this tool, please email implementation@nice.org.uk

To open the links in this slide set right click over the link and choose 'open link'

