NHS

South London
Cardiac and Stroke Network

Key Recommendations from NICE Guidance: Cardiovascular Disease Management

A guide for general practitioners

This document contains all key recommendations from NICE guidance on cardiovascular disease management.

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Management of Atrial Fibrillation (2006)

NICE guidance | Quick reference guide

Identification and diagnosis

An electrocardiogram (ECG) should be performed in all patients, whether symptomatic or not, in whom AF is suspected because an irregular pulse has been detected.

Treatment for persistent AF

Some patients with persistent AF will satisfy criteria for either an initial rate-control or rhythm control strategy (i.e. age over 65 but also symptomatic):

- Indications for each option should not be regarded as mutually exclusive, with the potential advantages and disadvantages of each strategy should be explained to patients before agreeing which to adopt.
- Any co-morbidities that might indicate one approach rather than the other should be taken into account.
- Irrespective of whether a rate-control or rhythm-control strategy is adopted in patients with persistent AF, appropriate antithrombotic therapy should be used.

Treatment for permanent AF

In patients with permanent AF, who need treatment for rate-control:

- Beta-blockers or rate-limiting calcium antagonists should be the preferred initial monotherapy in all patients
- Digoxin should only be considered as monotherapy in predominantly sedentary patients.

Antithrombotic therapy

In patients with newly diagnosed AF for whom antithrombotic therapy is indicated (see page 8 of quick reference guide), such treatment should be initiated with minimal delay after the appropriate management of co morbidities.

The stroke risk stratification algorithm (see page 7 in quick reference guide) should be used in patients with AF to assess their risk of stroke and thromboembolism and appropriate thromboprophylaxis given.

EARLY IDENTIFICATION AND MANAGEMENT OF CKD IN ADULTS (2008)

NICE guidance | **Quick reference guide**

Detect and identify proteinuria

Use urine ACR in preference, as it has greater sensitivity than PCR for low levels of proteinuria. For quantification and monitoring of proteinuria, PCR can be used as an alternative. ACR is the recommended method for people with diabetes.

Offer ACE inhibitors/ARBs

- To non-diabetic people with CKD and hypertension and ACR ≥ 30 mg/mmol (approximately equivalent to PCR ≥ 50 mg/mmol, or urinary protein excretion≥ 0.5 g/24 h).
- Stage 3 CKD should be split into two subcategories (*see table on page 6 of quick reference guide*) defined by: GFR 45–59 ml/min/1.73 m2 (stage 3A) and GFR 30–44 ml/min/1.73 m2 (stage 3B).

People with CKD in the following groups should normally be referred for specialist assessment:

- Stage 4 and 5 CKD (with or without diabetes)
- Higher levels of proteinuria (ACR ≥ 70 mg/mmol, approximately equivalent to PCR ≥ 100 mg/mmol, or urinary protein excretion ≥ 1 g/24 h) unless known to be due to diabetes and already appropriately treated
- Proteinuria (ACR ≥ 30 mg/mmol, approximately equivalent to PCR ≥ 50 mg/mmol, or urinary protein excretion ≥ 0.5 g/24 h) together with haematuria
- Rapidly declining eGFR (> 5 ml/min/1.73 m2 in 1 year, or > 10 ml/min/1.73 m2 within 5 years)
- Hypertension that remains poorly controlled despite the use of at least four antihypertensive drugs at therapeutic doses *(See Hypertension: management guide).*
- People with, or suspected of having, rare or genetic causes of CKD or suspected renal artery stenosis.

OFFER PEOPLE TESTING FOR CKD IF THEY PRESENT ANY OF THE FOLLOWING RISK FACTORS:

- Diabetes
- Hypertension
- CVD (ischaemic heart disease, chronic heart failure, peripheral vascular disease and cerebral vascular disease)
- Structural renal tract disease, renal calculi or prostatic hypertrophy
- Multisystem diseases with potential kidney involvement (i.e. systemic lupus erythematosus).
- Family history of stage 5 CKD or hereditary kidney disease
- Opportunistic detection of haematuria or proteinuria

TAKE THE FOLLOWING STEPS TO IDENTIFY PROGRESSIVE CKD

Obtain a minimum of three GFR estimations over a period of not less than 90 days. In people with a new finding of reduced eGFR, repeat the eGFR within 2 weeks to exclude causes of acute deterioration of GFR – for example, acute kidney injury or initiation of ACE inhibitor/ARB therapy.

Define progression as a decline in eGFR of > 5 ml/min/1.73 m2 within 1 year, or > 10 ml/min/1.73 m2 within 5 years.

Focus particularly on those in whom a decline of GFR continuing at the observed rate would lead to the need for renal replacement therapy within their lifetime by extrapolating the current rate of decline.

In people with CKD aim to keep the systolic blood pressure below 140 mmHg (target range 120–139 mmHg) and the diastolic blood pressure below 90 mmHg2.

Type 1 Diabetes: Diagnosis and management of type 1 diabetes in children, young people and adults (2004)

NICE guidance | **Quick reference guide**

Management for adults

The range of professional skills needed for delivery of optimal advice to adults with diabetes should be provided by a multidisciplinary team, covering the following areas of care:

- Education/ information giving
- Foot care
- Nutrition
- Counselling
- Therapeutics
- Psychological care
- Identification and management of complications

Education for adults with diabetes

Culturally appropriate education should be offered after diagnosis to all adults with type 1 diabetes (and to those with significant input into the diabetes care of others). It should be repeated as requested and according to annual review of need. This should encompass the necessary understanding, motivation and skills to manage appropriately:

- Blood glucose control (insulin, self-monitoring, nutrition)
- Arterial risk factors (blood lipids, blood pressure, smoking)
- Late complications (feet, kidneys, eyes, heart)

Blood glucose control

Blood glucose control should be optimised towards attaining DCCT-harmonised HbA1c targets for prevention of microvascular disease (less than 7.5%) and, in those at increased risk, arterial disease (less than or equal to 6.5%) as appropriate, while taking into account:

- The experiences and preferences of the insulin user, in order to avoid hypoglycaemia
- The necessity to seek advice from professionals knowledgeable about the range of available meal-time and basal insulins and about optimal combinations thereof, and their optimal use.

Arterial risk-factor control

Adults with type 1 diabetes should be assessed for arterial risk at annual intervals. Those found to be at increased risk should be managed through appropriate interventions and regular review. Note should be taken of:

- Microalbuminuria, in particular
- The presence of features of the metabolic syndrome
- Conventional risk factors (family history, abnormal lipid profile, raised blood pressure, smoking)

Late complications

Adults with type 1 diabetes should be assessed for early markers and features of eye, kidney, nerve, foot and arterial damage at annual intervals. According to assessed need, they should be offered appropriate interventions and/or referral in order to reduce the progression of such late complications into adverse health outcomes affecting quality of life.

Management for children and young people:

Children and young people with type 1 diabetes should be offered an ongoing integrated package of care by a multidisciplinary paediatric diabetes care team.

To optimise the effectiveness of care and reduce the risk of complications, the diabetes care team should include members with appropriate training in clinical, educational, dietetic, lifestyle, mental health and foot care aspects of diabetes for children and young people.

At the time of diagnosis, they should be offered home based or inpatient management according to clinical need, family circumstances and wishes, and residential proximity to inpatient services. Home-based care with support from the local paediatric diabetes care team (including 24-hour telephone access to advice) is safe and as effective as inpatient initial management.

Monitoring glycaemic control

Children and young people with type 1 diabetes and their families should be informed that the target for long-term glycaemic control is an HbA1c level of less than 7.5% without frequent disabling hypoglycaemia and that their care package should be designed to attempt to achieve this.

Diabetic ketoacidosis

Children and young people with diabetic ketoacidosis should be treated according to the guidelines published by the British Society for Paediatric Endocrinology and Diabetes *(see page 5 of quick reference guide).*

Screening for complications and associated conditions

Children and young people with type 1 diabetes should be offered screening for:

- Coeliac disease at diagnosis and at least every 3 years thereafter until transfer to adult services
- Thyroid disease at diagnosis and annually thereafter until transfer to adult services
- Retinopathy annually from the age of 12 years
- Microalbuminuria annually from the age of 12 years
- Blood pressure annually from the age of 12 years

Psychosocial support

Children and young people with type 1 diabetes and their families should be offered timely and ongoing access to mental health professionals because they may experience psychological disturbances (such as anxiety, depression, behavioural and conduct disorders and family conflict) that can impact on the management of diabetes and well-being.

TYPE 2 DIABETES - NEWER AGENTS (2009)

NICE guidance | **Quick reference guide**

Patient education

Offer structured education to every person and/or their carer at and around the time of diagnosis, with annual reinforcement and review. Inform people and their carers that structured education is an integral part of diabetes care.

Dietary advice

Provide individualised and ongoing nutritional advice from a healthcare professional with specific expertise and competencies in nutrition.

Setting a target HbA1c

Involve the person in decisions about their individual HbA1c target level, which may be above that of 6.5 per cent set for people with type 2 diabetes in general– encourage the person to maintain their individual target unless the resulting side effects (including hypoglycaemia) or their efforts to achieve this impair their quality of life – offer therapy (lifestyle and medication) to help achieve and maintain the HbA1c target level – inform a person with a higher HbA1c that any reduction in HbA1c towards the agreed target is advantageous to future health. Avoid pursuing highly intensive management to levels of less than 6.5 per cent.

Self-monitoring

Offer self-monitoring of plasma glucose to a person newly diagnosed with type 2 diabetes, but only as an integral part of his or her self-management education. Discuss its purpose and agree how it should be interpreted and acted upon.

Starting insulin therapy

Use a structured programme employing active insulin dose titration that encompasses: structured education; continuing telephone support; frequent self-monitoring; dose titration to target; dietary understanding; management of hypoglycaemia; management of acute changes in plasma glucose control; support from an appropriately trained and experienced healthcare professional.

HYPERTENSION: MANAGEMENT OF HYPERTENSION IN ADULTS IN PRIMARY CARE (2007)

NICE guidance | **Quick reference guide**

Measuring blood pressure

To identify hypertension (persistent raised blood pressure above 140/90 mmHg), ask the patient to return for at least two subsequent clinics where blood pressure is assessed from two readings under the best conditions available.

Routine use of automated ambulatory blood pressure monitoring or home monitoring devices in primary care is not currently recommended because their value has not been adequately established; appropriate use in primary care remains an issue for further research.

Lifestyle interventions

Lifestyle advice should be offered initially and then periodically to patients undergoing assessment or treatment for hypertension.

Cardiovascular risk

If raised blood pressure persists and the patient does not have established CVD, discuss with them the need to formally assess their cardiovascular risk. Tests may help identify diabetes, evidence of hypertensive damage to the heart and kidneys, and secondary causes of hypertension such as kidney disease.

Consider the need for specialist investigation of patients with signs and symptoms suggesting a secondary cause of hypertension. Accelerated (malignant) hypertension and suspected phaeochromocytoma require immediate referral.

Pharmacological interventions

Drug therapy reduces the risk of cardiovascular disease and death. Offer drug therapy to:

- Patients with persistent high blood pressure of 160/100 mmHg or more
- Patients at raised cardiovascular risk (10-year risk of CVD of 20% or more or existing CVD or target organ damage) with persistent blood pressure of more than 140/90 mmHg.
- In hypertensive patients aged 55 or older or black patients of any age, the first choice for initial therapy should be either a calcium-channel blocker or a thiazide-type diuretic. For this recommendation, black patients are considered to be those of African or Caribbean descent, not mixed-race, Asian or Chinese.
- In hypertensive patients younger than 55, the first choice for initial therapy should be an angiotensin-converting enzyme (ACE) inhibitor (or an angiotensin-II receptor antagonist if an ACE inhibitor is not tolerated).

Continuing treatment

Provide an annual review of care to monitor blood pressure, provide patients with support and discuss their lifestyle, symptoms and medication.

Patients may become motivated to make lifestyle changes and want to stop using antihypertensive drugs. If at low cardiovascular risk and with well controlled blood pressure, these patients should be offered a trial reduction or withdrawal of therapy with appropriate lifestyle guidance and ongoing review.

Lipid Modification (2008)

NICE guidance | Quick reference guide

CVD predominantly affects people older than 50. Apart from age and sex, three modifiable risk factors: Smoking, Raised blood pressure and Raised cholesterol, make a major contribution to CVD risk, particularly in combination. The risk of a future CVD event can be calculated from these risk factors, and people at higher risk can be identified. Blood cholesterol has a log–linear relationship to the risk of coronary heart disease (CHD) and is a key modifiable risk factor. Blood cholesterol can be reduced by dietary change, physical activity and drugs.

Prevention of CVD

For the primary prevention of CVD in primary care, a systematic strategy should be used to identify people aged 40–74 who are likely to be at high risk.

People should be prioritised on the basis of an estimate of their CVD risk before a full formal risk assessment. Their CVD risk should be estimated using CVD risk factors already recorded in primary care electronic medical records.

The Framingham 1991 10-year risk equations should be used to assess CVD risk. CVD risk should be calculated as:

CVD risk = 10-year risk of fatal and non-fatal stroke + 10-year risk of coronary including transient ischaemic attack heart disease (CHD) a CHD risk includes the risks of death from CHD, and non-fatal CHD, including silent myocardial infarction, angina and coronary insufficiency (acute coronary syndrome).

People should be offered information about their absolute risk of CVD and about the absolute benefits and harms of an intervention over a 10-year period. This information should be in a form that: presents individualised risk and benefit scenarios, presents the absolute risk of events numerically and uses appropriate diagrams and text.

Before offering lipid modification therapy for primary prevention all other modifiable CVD risk factors should be considered and their management optimised if possible. Baseline blood tests and clinical assessment should be performed, and co morbidities and secondary causes of dyslipidaemia should be treated.

Assessment should include: smoking status, alcohol consumption, blood pressure, body mass index or other measure of obesity, fasting total cholesterol, LDL cholesterol, HDL cholesterol and triglycerides (if fasting levels are not already available), fasting blood glucose, renal function, liver function (transaminases), thyroid-stimulating hormone if dyslipidaemia is present.

Guidance of Familial hypercholesterolemia (2008)

NICE guidance | **Quick reference guide**

FH is a genetic condition that causes a high cholesterol concentration in the blood. It is caused by mutations in genes of the pathway that clears low-density lipoprotein (LDL) from the bloodstream (in most cases the LDL receptor). This is present from birth and may lead to early development of atherosclerosis and coronary heart disease. The disease is transmitted from generation to generation in a dominant pattern; children of a person with FH have a 50 per cent risk of inheriting FH.

The prevalence of heterozygous FH in the UK population is estimated to be 1 in 500, which means that approximately 110,000 people are affected. Having this condition leads to a greater than 50 per cent risk of coronary heart disease in men by the age of 50 years and at least 30 per cent in women by the age of 60 years, if left untreated.

Homozygous FH is rare, with an incidence of approximately one case per one million. Symptoms appear in childhood, and are associated with early death from coronary heart disease.

Diagnosis

A family history of premature coronary heart disease should always be assessed in a person being considered for a diagnosis of FH *(see Simon Broome criteria, page 7 of quick reference guide).*

In children at risk of FH because of one affected parent, the following diagnostic tests should be carried out by the age of 10 years or at the earliest opportunity thereafter a DNA test if the family mutation is known. LDL-C concentration measurement if the family mutation is not known.

When excluding a diagnosis of FH a further LDL-C measurement should be repeated after puberty because LDL-C concentrations change during puberty.

CHD risk estimation tools such as those based on the Framingham algorithm should not be used because people with FH are already at a high risk of premature coronary heart disease.

Identifying people with FH using cascade testing

All people with FH should be offered a referral to a specialist with expertise in FH for confirmation of diagnosis and initiation of cascade testing.

Cascade testing using a combination of DNA testing and LDL-C concentration measurement is recommended to identify affected relatives of those index individuals with a clinical diagnosis of FH. This should include at least the first- and second- and, when possible, third-degree biological relatives.

The use of a nationwide, family-based, follow-up system is recommended to enable comprehensive identification of people affected by FH.

Management for adults

Healthcare professionals should consider prescribing a high-intensity statin to achieve a recommended reduction in LDL-C concentration of greater than 50 per cent from baseline (that is, LDL-C concentration before treatment).

Management for children and young people

All children and young people diagnosed with, or being investigated for, should be offered a diagnosis of FH a referral to a specialist with expertise in FH in children and young people. This should be in an appropriate child/young person-focused setting that meets the standards within the 'National service framework for children, young people and maternity services'.

OBESITY: THE PREVENTION, IDENTIFICATION, ASSESSMENT AND MANAGEMENT OF OVERWEIGHT AND OBESITY IN ADULTS AND CHILDREN (2008)

NICE guidance | **Quick reference guide 2 for the NHS**

Public health

Managers and health professionals in all primary care settings should ensure that preventing and managing obesity is a priority, at both strategic and delivery levels. Dedicated resources should be allocated for action.

Primary care organisations and local authorities should recommend to patients, or consider endorsing, self-help, commercial and community weight management programmes only if they follow best practice *(see page 22 of quick reference guide for details of best practice standards).*

Clinical care

Multi component interventions are the treatment of choice. Weight management programmes should include behaviour change strategies to increase people's physical activity levels or decrease inactivity, improve eating behaviour and the quality of the person's diet and reduce energy intake.

Management for children

Interventions for childhood overweight and obesity should address lifestyle within the family and in social settings.

Body mass index (BMI) (adjusted for age and gender) is recommended as a practical estimate of overweight in children and young people, but needs to be interpreted with caution because it is not a direct measure of adiposity.

Referral to an appropriate specialist should be considered for children who are overweight or obese and have significant co-morbidity or complex needs (i.e. learning or educational difficulties).

Management for adults

The decision to start drug treatment, and the choice of drug, should be made after discussing with the patient the potential benefits and limitations, including the mode of action, adverse effects and monitoring requirements and their potential impact on the patient's motivation.

When drug treatment is prescribed, arrangements should be made for appropriate health professionals to offer information, support and counselling on additional diet, physical activity and behavioural strategies. Information about patient support programmes should also be provided.

Bariatric surgery is recommended as a treatment option for adults with obesity if all of the following criteria are fulfilled:

- They have a BMI of 40 kg/m2 or more, or between 35 kg/m2 and 40 kg/m2 and other significant disease (for example, type 2 diabetes or high blood pressure) that could be improved if they lost weight.
- All appropriate non-surgical measures have been tried but have failed to achieve or maintain adequate, clinically beneficial weight loss for at least 6 months.
- The person has been receiving or will receive intensive management in a specialist obesity service, is generally fit for anaesthesia and surgery, and commits to the need for long-term follow-up.

Bariatric surgery is also recommended as a first-line option (instead of lifestyle interventions or drug treatment) for adults with a BMI of more than 50 kg/m2 in whom surgical intervention is, considered appropriate.

Brief interventions and referral for smoking cessation in primary care (2006)

NICE Guidance | **Quick reference guide**

For smoking cessation, brief interventions typically take between 5 and 10 minutes. The particular package that is provided will depend on a number of factors, including the individual's willingness to quit, how acceptable they find the intervention on offer and the previous ways they have tried to quit. It may include one or more of the following:

- Simple opportunistic advice to stop
- An assessment of the patient's commitment to quit
- Offer pharmacotherapy and/or behavioural support
- Provision of self-help material and referral to more intensive support (i.e. NHS Stop Smoking Services)

Recommendation 1

Everyone who smokes should be advised to quit, unless there are exceptional circumstances. People who are not ready to quit should be asked to consider the possibility and encouraged to seek help in the future. If an individual who smokes presents with a smoking-related disease, the cessation advice may be linked to their medical condition.

Recommendation 2

People who smoke should be asked how interested they are in quitting. Advice to stop smoking should be sensitive to the individual's preferences, needs and circumstances: there is no evidence that the 'stages of change' model is more effective than any other approach.

Recommendation 3

GPs should take the opportunity to advise all patients who smoke to quit when they attend a consultation. Those who want to stop should be offered a referral to an intensive support service. If they are unwilling or unable to accept this referral they should be offered pharmacotherapy, and additional support. The smoking status of those who are not ready to stop should be recorded and reviewed with the individual once a year, where possible.

Recommendation 4

Nurses in primary and community care should advise everyone who smokes to stop and refer them to an intensive support service. If they are unwilling or unable to accept this referral, they should be offered pharmacotherapy by practitioners with suitable training, in line with NICE technology appraisal guidance no. 39, and additional support. Nurses who are trained NHS stop smoking counsellors may 'refer' to themselves, where appropriate. The smoking status of those who are not ready to stop should be recorded and reviewed with the individual once a year, where possible.

Recommendation 5

All other health professionals, such as hospital clinicians, pharmacists and dentists, should refer people who smoke to an intensive support service. If the individual is unwilling or unable to accept this referral, practitioners with suitable training should offer a prescription

of pharmacotherapy and additional support. Those who are trained NHS stop smoking counsellors may 'refer' to themselves. The smoking status of those who are not ready to stop should be recorded in clinical records and reviewed with the individual once a year, where possible.

Recommendation 6

Community workers should refer people who smoke to an intensive support service. Those who are trained NHS stop smoking counsellors may 'refer' to themselves.

Recommendation 7

Strategic health authorities, NHS hospital trusts, PCTs, community pharmacies, local authorities and local community groups should review smoking cessation policies and practices to take account of these recommendations.

Recommendation 8

Smoking cessation advice and support should be available in community, primary and secondary care settings for everyone who smokes. Local policy makers and commissioners should target hard to reach and deprived communities, including minority ethnic groups, paying particular attention to their needs.

Recommendation 9

Monitoring systems should be set up to ensure health professionals have access to information on the current smoking status of their patients. This should include information on: a) most recent occasion on which advice to stop was given, b) the nature of advice offered, and c) response to that advice.

SMOKING CESSATION SERVICES IN PRIMARY CARE, PHARMACIES, LOCAL AUTHORITIES AND WORKPLACES, PARTICULARLY FOR MANUAL WORKING GROUPS, PREGNANT WOMEN AND HARD TO REACH COMMUNITIES (2008)

NICE Guidance | **Quick reference guide**

Although NHS Stop Smoking Services have helped large numbers of people to quit smoking, smoking cessation rates are still lower among people in routine and manual groups compared with those in higher socioeconomic groups. In particular, pregnant women in routine and manual groups and those aged 20 or under may need additional support to give up smoking. This guidance supersedes 'Guidance on the use of nicotine replacement therapy (NRT) and bupropion for smoking cessation'. It cross references and is consistent with: 'Brief interventions and referral for smoking cessation in primary care and other settings', 'Workplace health promotion: how to help employees to stop smoking' and 'Varenicline for smoking cessation'.

Recommendations for the below are summarised in tables, within the quick reference guide:

- Providing smoking cessation services (pages 3–4)
- Prescribing and advising on pharmacotherapies (pages 5–6)
- Targeting specific groups (pages 7–9)
- Education, training and public campaigns (pages 10–11)

DIAGNOSIS AND INITIAL MANAGEMENT OF ACUTE STROKE & TRANSIENT ISCHAEMIC ATTACK (2008)

NICE guidance | **Quick reference guide**

Symptoms of stroke

Include numbness, weakness or paralysis, slurred speech, blurred vision, confusion and severe headache. A transient ischaemic attack (TIA) is defined as stroke symptoms and signs that resolve within 24 hours.

Rapid recognition of symptoms and diagnosis

In people with sudden onset of neurological symptoms a validated tool, such as FAST (**F**ace **A**rm **S**peech **T**est), should be used outside hospital to screen for a diagnosis of stroke or TIA.

People who have had a suspected TIA who are at high risk of stroke (that is, with an ABCD2 score of 4 or above) should have:

- Aspirin (300 mg daily) started immediately
- Specialist assessment and investigation within 24 hours of onset of symptoms
- Measures for secondary prevention introduced as soon as the diagnosis is confirmed, including discussion of individual risk factors
- People with crescendo TIA (two or more TIAs in a week) should be treated as being at high risk of stroke, even though they may have an ABCD2 score of 3 or below

Specialist care for people with acute stroke

All people with suspected stroke should be admitted directly to a specialist acute stroke unit, following initial assessment, either from the community or from the A&E department.

Brain imaging should be performed immediately for people with acute stroke if any of the following apply:

- Indications for thrombolysis or early anticoagulation treatment
- On anticoagulant treatment
- Known bleeding tendency
- Depressed level of consciousness (Glasgow Coma Score below 13)
- Unexplained progressive or fluctuating symptoms
- Papilloedema, neck stiffness or fever
- Severe headache at onset of stroke symptoms

Nutrition and hydration

On admission, people with acute stroke should have their swallowing screened by an appropriately trained healthcare professional before being given any oral food, fluid or medication.

Authors

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