

NATIONAL INSTITUTE FOR HEALTH AND CLINICAL EXCELLENCE

SCOPE**1 Guideline title**

Familial hypercholesterolaemia: the identification and management of patients with familial hypercholesterolaemia

1.1 Short title

Familial hypercholesterolaemia

2 Background

- a) The National Institute for Health and Clinical Excellence ('NICE' or 'the Institute') has commissioned the National Collaborating Centre for Primary Care to develop a clinical guideline on familial hypercholesterolaemia (FH) for use in the NHS in England and Wales. This follows referral of the topic by the Department of Health and Welsh Assembly Government (see appendix). The guideline will provide recommendations for good practice that are based on the best available evidence of clinical and cost effectiveness.
- b) The Institute's clinical guidelines will support the implementation of National Service Frameworks (NSFs) in those aspects of care where a Framework has been published. The statements in each NSF reflect the evidence that was used at the time the Framework was prepared. The clinical guidelines and technology appraisals published by the Institute after an NSF has been issued will have the effect of updating the Framework.
- c) NICE clinical guidelines support the role of healthcare professionals in providing care in partnership with patients, taking account of their individual needs and preferences, and ensuring that patients (and their carers and families, where appropriate) can make informed decisions about their care and treatment.

Familial hypercholesterolaemia draft scope for consultation 10 July–7 August

3 Clinical need for the guideline

- a) Familial hypercholesterolaemia is an inherited monogenic disorder that may be either heterozygous or homozygous.

Burden of disease

- b) The prevalence of heterozygous familial hypercholesterolaemia in the UK population is estimated to be 1 in 500, which means that approximately 110,000 people are affected. The elevated serum cholesterol concentrations that characterise heterozygous FH lead to a greater than 50% risk of coronary heart disease by the age of 50 in men and at least 30% in women aged 60.
- c) Homozygous familial hypercholesterolaemia is rare, presents in children and is associated with early death. Homozygous FH has an incidence of one case per million.

Evidence of effective interventions

- d) Early detection and treatment with hydroxyl-methylglutaryl-coenzyme (HMG CoA) reductase inhibitors (statins) has been shown to reduce morbidity and mortality in those with heterozygous FH. LDL apheresis and liver transplantation are treatment options for patients with homozygous FH.
- e) There is evidence that screening can be effective in identifying people in the early stages of FH. Methods proposed include population-wide screening and cascade screening of the relatives of identified (index) cases.
- f) Currently, diagnosis involves clinical assessment and biochemical tests (lipid profile). DNA-based testing may play a greater role in the identification and management of FH in future.

Evidence of variation in clinical practice

- g) The current strategy of opportunistic case identification in the UK means that most people with FH are diagnosed only after developing established coronary heart disease. This can be addressed by the development and implementation of screening strategies.

4 The guideline

- a) The guideline development process is described in detail in two publications that are available from the NICE website (see 'Further information'). 'The guideline development process: an overview for stakeholders, the public and the NHS' describes how organisations can become involved in the development of a guideline. 'The guidelines manual' provides advice on the technical aspects of guideline development.
- b) This document is the scope. It defines exactly what this guideline will (and will not) examine, and what the guideline developers will consider. The scope is based on the referral from the Department of Health and Welsh Assembly Government (see appendix).
- c) The areas that will be addressed by the guideline are described in the following sections.

4.1 Population

4.1.1 Groups that will be covered

- a) Adults and children with heterozygous FH.
- b) Adults and children with homozygous FH.

4.1.2 Groups that will not be covered

- a) Patients with secondary hyperlipidaemia.
- b) Patients with polygenic and combined hyperlipidaemia.

- c) Patients with hypertriglyceridaemia and type III hyperproteinaemia.

4.2 *Healthcare setting*

- a) Screening, diagnostic testing and the management of heterozygous FH in adults and children in primary, secondary or tertiary care settings.
- b) Tertiary care for the rare condition of homozygous FH in all age groups.

4.3 *Clinical management*

- a) Methods for the identification of individuals with FH, including the role of:
- opportunistic identification
 - cascade screening.
- b) Combinations of methods of diagnostic testing for familial hypercholesterolaemia including:
- clinical symptoms and signs
 - biochemical tests made on plasma samples
 - DNA-based tests.
- c) Arrangements for patients with confirmed familial hypercholesterolaemia, including the timing and need for genetic counselling.
- d) Management of children with homozygous and heterozygous FH including:
- dietary interventions
 - drug therapy
 - apheresis.
- e) Management of adults with homozygous and heterozygous FH, including the following.

- Pharmacological interventions, including drug combinations to lower cholesterol, aggressive versus conventional therapy, and evaluation of treatment with the following classes of drugs:
 - statins
 - resins
 - fibrates
 - nicotinic acid
 - ezetimibe.

Note that guideline recommendations will normally fall within licensed indications; exceptionally, and only where clearly supported by evidence, use outside a licensed indication may be recommended. The guideline will assume that prescribers will use a drug's summary of product characteristics to inform their decisions for individual patients.

- Other interventions:
 - apheresis
 - liver transplantation (up to the point of referral).
- f) Advice on the following ongoing lifestyle modifications for people with FH, with cross reference to other NICE guidelines as appropriate:
- diet
 - exercise and regular physical activity
 - smoking cessation.
- g) Statin use in women of child-bearing age, with respect to the higher risk of foetal abnormalities.
- h) The need for continuing clinical assessment and review of patients with familial hypercholesterolaemia.

- i) The need for pre-natal diagnosis (or pre-implantation genetic diagnosis) in those families at risk of having homozygous FH children.
- j) Information and support for patients with familial hypercholesterolaemia.

Areas that will not be covered

- k) Techniques for liver transplantation or plasma apheresis.
- l) Measurement and reporting of blood lipids (this is covered by the NICE clinical guideline on cardiovascular risk assessment, see section 4.1.1).

4.4 Status

4.4.1 Scope

This is the consultation draft of the scope. The consultation period is 10 July to 7 August.

The guideline will incorporate the following NICE technology appraisals.

- Statins for the prevention of cardiovascular events in patients at increased risk of developing cardiovascular disease or those with established cardiovascular disease. NICE technology appraisal no. 94 (2006). Available from www.nice.org.uk/TA094
- Ezetimibe for the treatment of hypercholesterolemia. Expected date of publication August 2007.

The following related NICE guidance will be referred to as appropriate.

- Brief interventions and referral for smoking cessation in primary care and other settings. *NICE public health intervention guidance* no. 1 (2006). Available from www.nice.org.uk/PHI001

- Hypertension: management of hypertension in adult patients in primary care. *NICE clinical guideline* no. 18. (2004). Available from www.nice.org.uk/CG018
- Type 1 diabetes: diagnosis and management of type 1 diabetes in children, young people and adults. *NICE clinical guideline* no. 15. (2004). Available from www.nice.org.uk/CG015
- Type 2 diabetes: management of blood pressure and blood lipids. *NICE inherited guideline* H. (2002). Available from www.nice.org.uk/guidelineH
- Obesity: the prevention, identification, assessment and management of overweight and obesity in adults and children. *NICE clinical guideline*. Expected date of publication January 2007.
- MI: secondary prevention in primary and secondary care for patients following a myocardial infarction. *NICE clinical guideline*. Expected date of publication March 2007.
- Cardiovascular risk assessment: the modification of blood lipids for the primary and secondary prevention of cardiovascular disease. *NICE clinical guideline*. Expected date of publication December 2007.

4.4.2 Guideline

The development of the guideline recommendations will begin in September 2006.

5 Further information

Information on the guideline development process is provided in:

- 'The guideline development process: an overview for stakeholders, the public and the NHS'
- 'The guidelines manual'.

These booklets are available as PDF files from the NICE website (www.nice.org.uk/guidelinesmanual). Information on the progress of the guideline will also be available from the website.

Appendix: Referral from the Department of Health

The Department of Health and Welsh Assembly Government asked the Institute:

‘To prepare a clinical guideline for the NHS in England and Wales for the identification and management of patients suffering from familial hypercholesterolaemia to include advice regarding the optimal approach to case identification, cascade screening, medical management and the use of apheresis.’