

## **Barnsley Severe Hyperlipidaemia Pathway**

To be used in alongside the Barnsley Lipid Management Pathways for Primary and Secondary Prevention of CVD (Secondary Prevention Pathway in development)

### **SEVERE HYPERLIPIDAEMIA**

If TC>7.5mmol/L and/or LDL-C>4.9mmol/L and/or non-HDL-C >5.9mmol/L, a personal and/or family history of confirmed CHD (<60 years) and with no secondary causes:

suspect familial hypercholesterolaemia (possible heterozygous FH)

Do not use QRISK risk assessment tool

**For referrals to Sheffield, see Sheffield FH referral criteria (page 2)\***

### **DIAGNOSIS AND REFERRAL**

Take **fasting** blood for repeat lipid profile to measure LDL-C.

Use the **Simon Broome** or **Dutch Lipid Clinic Network (DLCN)** criteria to make a **clinical diagnosis of FH**.

Refer to Lipid Clinic for further assessment if **clinical diagnosis of FH** **OR** contact [medicine.information1@nhs.net](mailto:medicine.information1@nhs.net) (for attention of Lead Pharmacist, Medicines Information and Cardiology, BHNFT) for advice and guidance;

if TC>9.0mmol/L and/or

LDL-C >6.5mmol/L and/or

non-HDL-C >7.5mmol/L or

Fasting triglycerides > 10mmol/L (regardless of family history)

(see page 4 Barnsley Lipid Management for Primary Prevention of CVD in adults)

### **TREATMENT TARGETS IN FH**

If clinical diagnosis of FH and/or other risk factors present follow the recommended treatment management pathway for primary or secondary prevention as for non-FH (see relevant Barnsley Guideline), **BUT**

**Aim to achieve at least a 50% reduction of LDL-C (or non-fasting non-HDL-C) from baseline.**

**Consider specialist referral for further treatment and/or consideration of PCSK9i therapy (also see NICE eligibility criteria on page 2) IF**

- they are assessed to be at very high risk of a coronary event\*\*
  - OR therapy is not tolerated
  - OR LDL-C remains >5mmol/L (primary prevention)
  - OR LDL-C remains >3.5mmol/L (secondary prevention)
- despite maximal tolerated statin and ezetimibe therapy.

\*\*defined as any of the following:

- Established coronary heart disease
- Two or more other CVD risk factors

\*STH referral pathway for adult patients with query familial hypercholesterolaemia (FH):  
<http://nww.sth.nhs.uk/NHS/LaboratoryMedicine/Guidelines/LMGRP0032%20Query%20Familial%20Hypercholesterolaemia.pdf>

### **PCSK9i NICE eligibility criteria**

NICE eligibility criteria for PCSK9i and fasting LDL-C thresholds are summarised below:

|                                | Without CVD        | With CVD               |                             |
|--------------------------------|--------------------|------------------------|-----------------------------|
|                                |                    | High risk <sup>1</sup> | Very High Risk <sup>2</sup> |
| <b>Primary heterozygous-FH</b> | LDL-C > 5.0 mmol/L | LDL-C > 3.5 mmol/L     |                             |

[NICE TA393](#) Alirocumab  
[NICE TA394](#) Evolocumab

<sup>1</sup> History of any of the following: ACS; coronary or other arterial revascularisation procedures; CHD, ischaemic stroke; PAD.

<sup>2</sup> Recurrent CV events or CV events in more than 1 vascular bed (that is, polyvascular disease).

***PCSK9 inhibitors have a red classification on the Barnsley Formulary.***

### **Abbreviations and Definitions**

**CHD:** coronary heart disease

**CVD:** cardiovascular disease

**FH:** familial hypercholesterolaemia

**LDL-C:** low density lipoprotein cholesterol

**non-HDL-C:** non-high density lipoprotein cholesterol

**PCSK9i:** proprotein convertase subtilisin kexin 9 monoclonal antibody inhibitor

**TC:** total cholesterol

**non-HDL-C** = TC minus HDL-C

**LDL-C** = non-HDL-C minus (Fasting triglycerides<sup>a</sup>/2.2)

<sup>a</sup> valid only when fasting triglycerides are less than 4.5 mmol/L

### **Acknowledgements**

This guidance has been adapted from the NHS Accelerated Access Collaborative Summary of National Guidance for Lipid Management for Primary and Secondary Prevention of CVD. [Summary-of-national-guidance-for-lipid-management-for-primary-and-secondary-prevention-of-cardiovascular-disease.pdf \(england.nhs.uk\)](#)

### **Development Process**

This guidance was endorsed by the Barnsley Area Prescribing Committee on 13<sup>th</sup> July 2022.