



# Lipid Management: Medicines Optimisation Pathways

Developed by SEL Cardiovascular Medicines Working Group on behalf of the SEL Integrated Medicines Optimisation Committee (IMOC) and following guidance from the National Institute for Health and Care Excellence (NICE), NHS England/Accelerated Access Collaborative (AAC) and UCL Partners

Approval date: April 2025

Review date: April 2027 (or sooner if evidence or practice changes)

**Not to be used for commercial or marketing purposes. Strictly for use within the NHS**

South East London Integrated Medicines Optimisation Committee (SEL IMOC). A partnership between NHS organisations in South East London Integrated Care System: NHS South East London (covering the boroughs of Bexley/Bromley/Greenwich/ Lambeth/Lewisham and Southwark) and GSTFT/KCH /SLaM/ Oxleas NHS Foundation Trusts and Lewisham & Greenwich NHS Trust

# Contents



<a href="#">Page 3</a>	Why Is Lipid Management Important?
<a href="#">Page 4</a>	Lipid Optimisation Pathway for Patients with High Cardiovascular Risk – Primary Prevention
<a href="#">Page 5</a>	Lipid Optimisation Pathway for Secondary Prevention
<a href="#">Page 6</a>	Statin Intolerance Pathway
<a href="#">Page 7</a>	Shared Decision-Making Resources
<a href="#">Page 8</a>	Muscle Symptoms Pathway
<a href="#">Page 9</a>	Abnormal Liver Function Test Pathway
<a href="#">Page 10</a>	Lipid management options and LDL reduction: Consider also the evidence of a benefit for CV risk reduction with each medicine
<a href="#">Page 11</a>	Recommended Criteria For Referral to Lipid Clinic (SEL Hospital and Community settings)
<a href="#">Page 12</a>	Summary of lipid lowering options and CV risk reduction
<a href="#">Page 13</a>	Familial Hypercholesterolaemia (FH) Pathway
<a href="#">Page 14</a>	Guidance for the Management of Hypertriglyceridaemia
<a href="#">Page 15</a>	Management of Triglycerides
<a href="#">Page 16 - 22</a>	Resources/Supporting Materials
<a href="#">Page 23</a>	Glossary
<a href="#">Page 24</a>	References

Approval date: April 2025

Review date: April 2027 (or sooner if evidence or practice changes)

**Not to be used for commercial or marketing purposes. Strictly for use within the NHS**

South East London Integrated Medicines Optimisation Committee (SEL IMOC). A partnership between NHS organisations in South East London Integrated Care System: NHS South East London (covering the boroughs of Bexley/Bromley/Greenwich/ Lambeth/Lewisham and Southwark) and GSTFT/KCH /SLaM/ Oxleas NHS Foundation Trusts and Lewisham & Greenwich NHS Trust

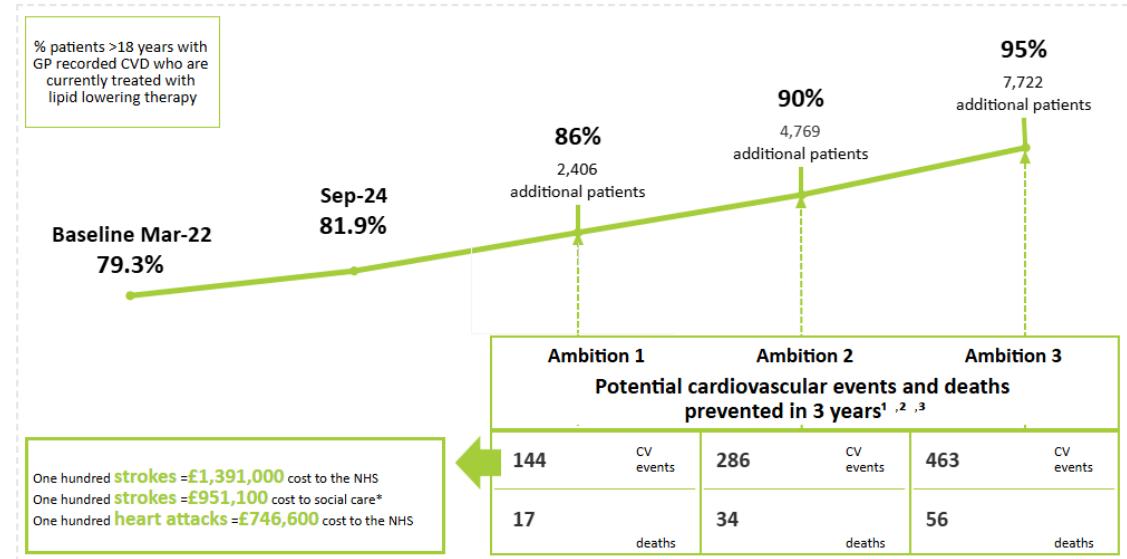
# Why is Lipid Management Important?



UCLPartners  
Health Innovation

- High cholesterol causes cardiovascular disease and is associated with an increased risk of cardiovascular death.<sup>1</sup>
- People with high cholesterol who also have other risk factors (e.g. high blood pressure, diabetes, smoking) are at significantly greater risk of CVD and have most to gain from a reduction in cholesterol. **Every 1mmol/l reduction in low-density lipoproteins (LDL) cholesterol reduces risk of a cardiovascular event by 25%.**<sup>2</sup>
- Lifestyle change is important to reduce cardiovascular risk. Where this is ineffective or in people at highest risk (e.g. pre-existing CVD or familial hypercholesterolaemia (FH), drug therapy with statins and other medications is very effective.
- Familial Hypercholesterolaemia (FH) is high-risk but very treatable. Half of men with FH will have a heart attack or stroke before age 50 and a third of women before age 60. Statins are highly effective at reducing this risk.<sup>3</sup>
- One in six patients with CVD are not receiving lipid lowering therapy, large numbers of people are not taking the recommended dose or intensity statins. Optimising treatment in these patients will prevent many more heart attacks and strokes.

Size of the Prize- South East London ICB  
Cholesterol Optimisation to Prevent Heart Attacks and Strokes at Scale



**For CVDP003CHOL:** Patients with no GP recorded CVD and a GP recorded QRISK score of 20% or more, who are currently treated with lipid lowering therapy:

- NHS South East London Integrated Care Board achievement (June 2024) = 61% (national ambition 65%\*).
- At least 2,547 people at high risk of a cardiovascular event would need to be treated with lipid lowering therapy to meet the national ambition

**For CVDP012CHOL:** Patients with GP recorded CVD (narrow definition), whose most recent blood cholesterol level is LDL-cholesterol less than or equal to 2.0 mmol/l or non-HDL cholesterol less than or equal to 2.6 mmol/l, in the preceding 12 months:

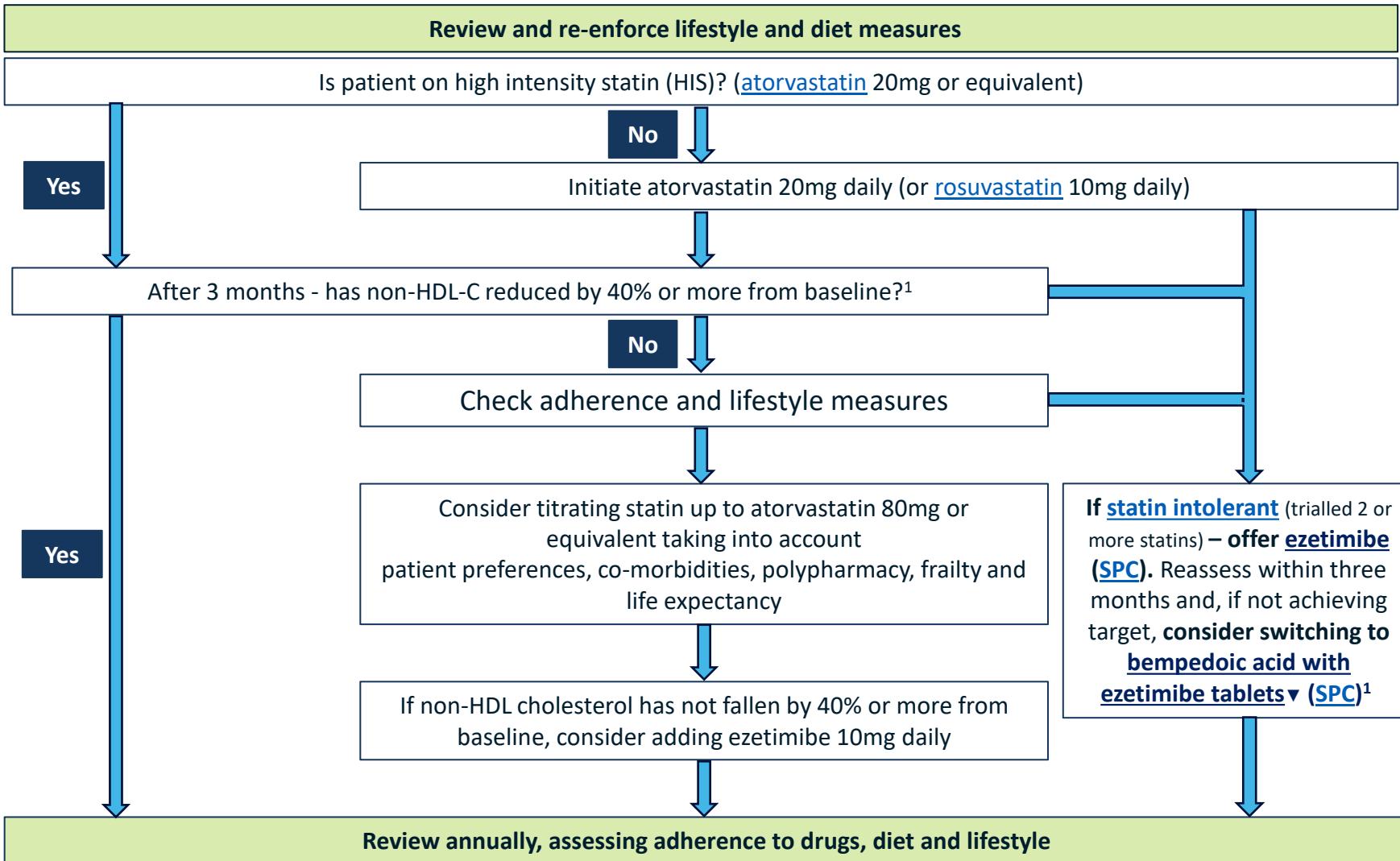
- NHS South East London Integrated Care Board achievement (June 2024) = 38%
- At least 36,215 people with known CVD have not achieved recommended lipid-lowering levels

Approval date: April 2025

Review date: April 2027 (or sooner if evidence or practice changes)

**Not to be used for commercial or marketing purposes. Strictly for use within the NHS**

# Lipid Optimisation Pathway for Patients with High Cardiovascular Risk – Primary Prevention



Lipid lowering therapy should be offered to all patients with a QRISK  $\geq 10\%$  after addressing lifestyle modification.<sup>4</sup>

Patients with the following conditions are high CVD risk and **require consideration** for a high intensity statin (HIS) regardless of QRISK: **familial hypercholesterolaemia (FH)**, **type 1 diabetes mellitus (T1DM)**, **chronic kidney disease (CKD)** and/or albuminuria.

Offer HIS to patients with T1DM and age  $> 40$  years or patients with T1DM  $> 10$  years or nephropathy or with other CVD risk factors [NICENG238](#)

Offer HIS to patients with Type 2 DM with CV risk  $\geq 10\%$  and to **all patients with CKD**

Consider additional CVD risk factors, if present, together with QRISK score

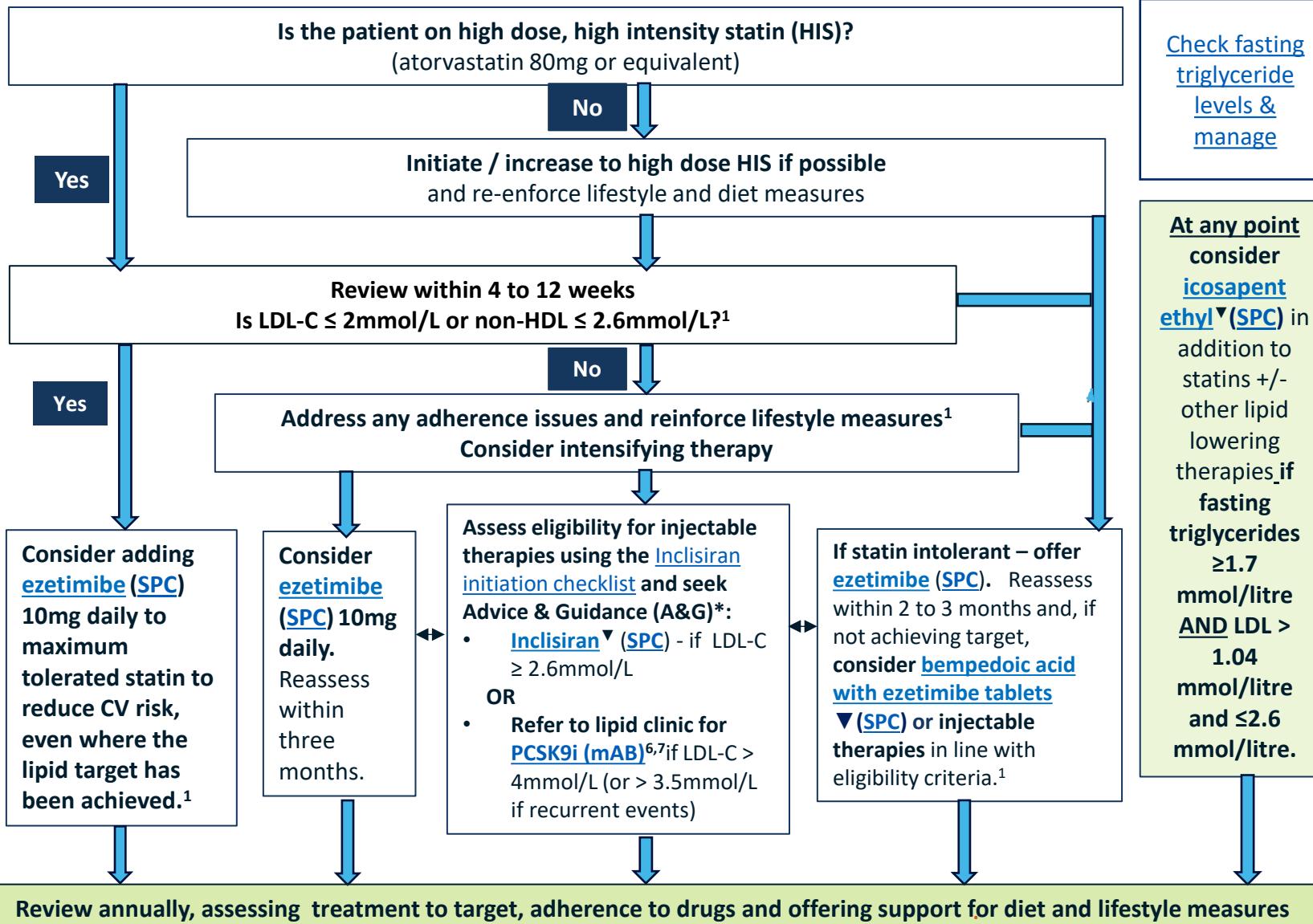
If **statin intolerant** (trialed 2 or more statins) – offer **ezetimibe (SPC)**. Reassess within three months and, if not achieving target, consider switching to **bempedoic acid with ezetimibe tablets (SPC)**<sup>1</sup>

**People living with HIV (PLWH)**  
All people living with HIV aged 40 years or older should be offered a statin for primary prevention of CVD irrespective of lipid profile or estimated CVD risk<sup>5</sup>.

Flowchart & dosage guidance of lipid - lowering management and HIV specialist contact details can be found [here](#)

**Not to be used for commercial or marketing purposes. Strictly for use within the NHS**

# Lipid Optimisation Pathway for Patients with Established Cardiovascular Disease - Secondary Prevention



Lipid lowering therapy should be offered to all patients with established CVD<sup>1</sup>

## High Intensity Statin (HIS) for secondary prevention

Atorvastatin	80mg
Rosuvastatin	20mg – 40mg (please note for rosuvastatin 40mg specialist supervision is recommended when this dose is initiated)

Dose may be limited, for example if:

- CKD: eGFR<60ml/min –recommended starting dose - atorvastatin 20mg
- Drug interactions
- Drug intolerance
- Older age / frailty

Use shared-decision making and incorporate patient preference in treatment and care decisions.

**Women of childbearing age** - as a precaution, most women are advised to stop taking statins for three months before trying to conceive, and during pregnancy. Refer to maternal medicine or lipid consultants for advice & guidance where appropriate

\*Where an individual qualifies for injectable therapies, as per NICE technology appraisals, consider these in preference to ezetimibe to prevent lipid levels being lowered but remaining above the LDL-C target and below thresholds for initiating injectable therapies

# Statin Intolerance Pathway

Statin intolerance is defined as the presence of clinically significant adverse effects that represent an unacceptable risk to the patient or that may reduce adherence to therapy (see [AAC pathway](#))

Discuss with the patient if signs and symptoms are statin intolerance or due to a statin reluctance/non-adherence. **Consider that a statin at any dose reduces CV risk** - if a patient cannot tolerate a high intensity statin (HIS), aim to treat with a maximum tolerated dose of a statin, but if symptoms persist consider alternative options/lipid clinic referral.



For Statin Related Muscle (SRM) symptoms: symmetrical pain/weakness in large proximal muscle groups, worsened by exercise. Measure creatine kinase (CK). See [here](#) for muscle symptoms pathway.



If CK normalises and symptoms have resolved for at least 2 weeks, then rechallenge: Offer a low/moderate dose of HIS e.g. atorvastatin 10 - 20mg daily or rosuvastatin 5 - 10mg daily. Please note: Non-standard dosing may be recommended by specialist clinics e.g. rosuvastatin 5mg weekly or three times a week (off label use but accepted practice).



If tolerating [ezetimibe \(SPC\)](#) but not achieving lipid lowering targets: consider [inclisiran<sup>▼</sup> \(SPC\)](#) following specialist advice if for secondary prevention or consider initiating [bempedoic acid<sup>▼</sup> 180mg daily \(SPC\)](#).

Approval date: April 2025

Review date: April 2027 (or sooner if evidence or practice changes)

Not to be used for commercial or marketing purposes. Strictly for use within the NHS

# Shared Decision-Making Resources

Benefits per 10,000 people taking statin for 5 years	Events avoided
Secondary Prevention: Major CV events* avoided in patients with pre-existing CVD & a 2mmol/L reduction in LDL	1,000
Primary Prevention: Major CV events* avoided in patients with no pre-existing CVD & a 2mmol/L reduction in LDL	500

\*Major CV events = CV death, non-fatal myocardial infarction and non-fatal stroke

**Shared decision-making resources:**

- [BHF information on statins](#)
- [Heart UK: Information on statins](#)
- [NICE shared decision-making guide](#)
- [Statins - side effects](#)

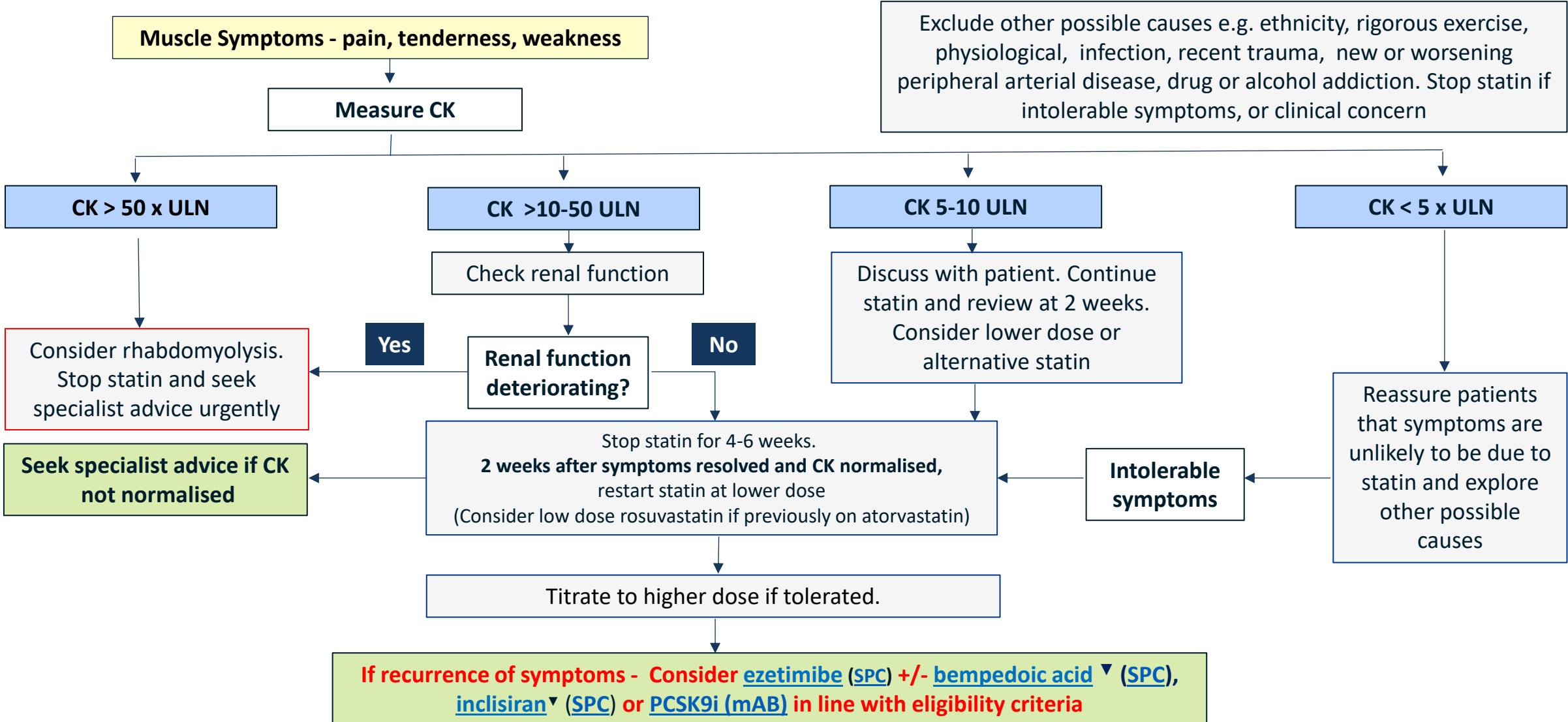
Adverse events per 10,000 people taking statin for 5 years	Adverse events
Myopathy	5
Haemorrhagic Strokes ( <a href="#">NICE CKS</a> ) The recommendation to avoid use of statins for secondary prevention in people with a history of intracerebral haemorrhage has been removed and information added to the basis to explain this change, based on a large trial which demonstrated no difference in adverse impact. The topic was also aligned with the recommendations contained in the updated NICE guideline ( <a href="#">NG236</a> )	5-10
Diabetes Cases	50-100

Approval date: April 2025

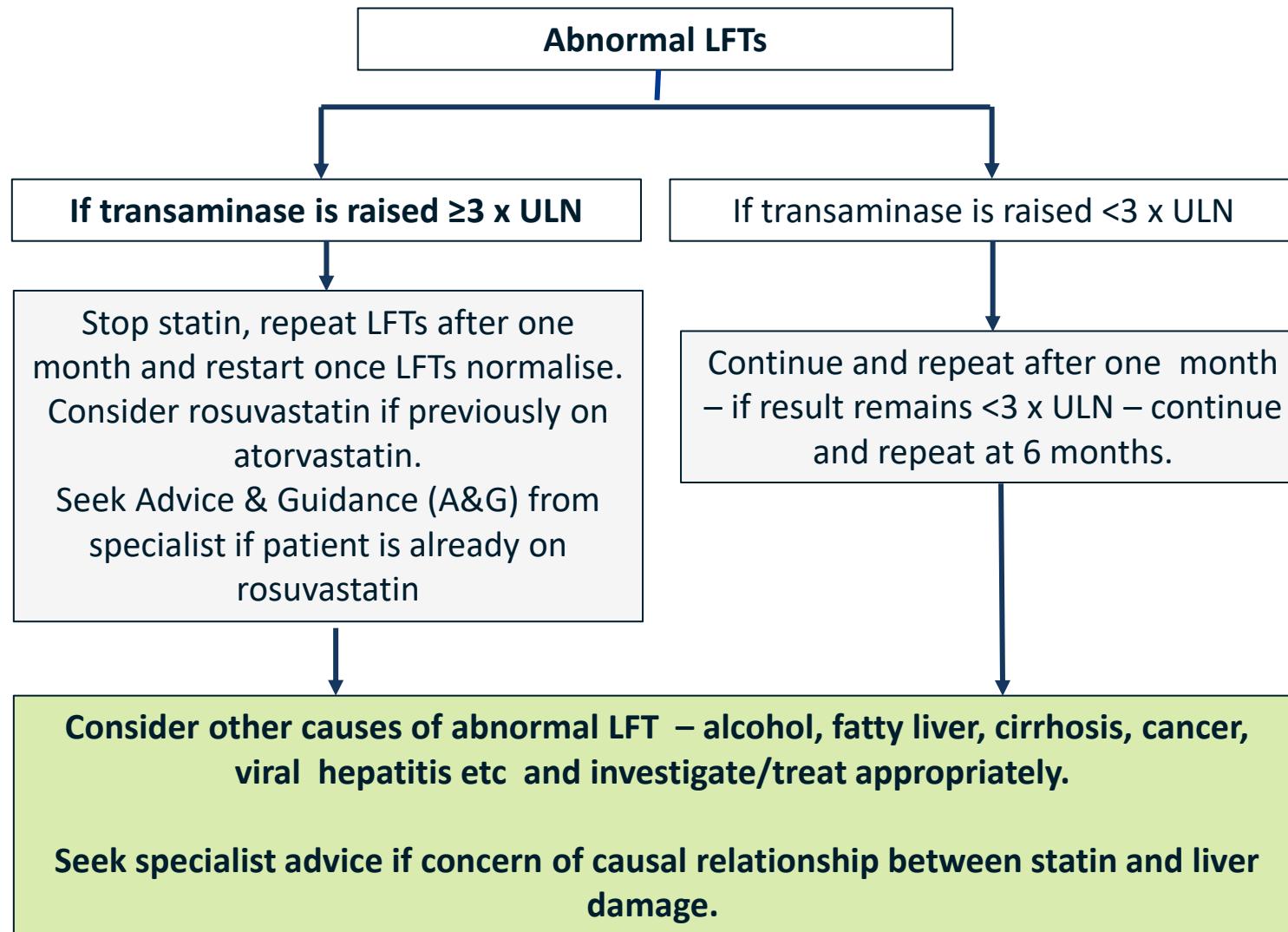
Not to be used for commercial or marketing purposes. Strictly for use within the NHS

Review date: April 2027 (or sooner if evidence or practice changes)

# Muscle Symptoms Pathway



# Abnormal Liver Function Test (LFT) Pathway



Check liver function (ALT/AST) at baseline, within 3 months and at 12 months after initiation of statin therapy.

Do not routinely exclude from statin therapy people who have liver transaminase levels that are raised but  $< 3 \times$  ULN

Most adults with fatty livers are likely to benefit from statins and this is not a contraindication.

Approval date: April 2025

Review date: April 2027 (or sooner if evidence or practice changes)

Not to be used for commercial or marketing purposes. Strictly for use within the NHS

South East London Integrated Medicines Optimisation Committee (SEL IMOC). A partnership between NHS organisations in South East London Integrated Care System: NHS South East London (covering the boroughs of Bexley/Bromley/Greenwich/ Lambeth/Lewisham and Southwark) and GSTFT/KCH /SLaM/ Oxleas NHS Foundation Trusts and Lewisham & Greenwich NHS Trust

# Lipid Management Options and LDL-C Reduction:

Approximate reduction in LDL-C						High intensity statins (HIS) reduce LDL-C >40% (highlighted green) and are more effective at preventing cardiovascular events than low / medium intensity statins.  NICE/AAC recommends atorvastatin and rosuvastatin as HIS.  *Simvastatin 80mg is not recommended due to muscle toxicity risk.
Drug / daily dose	5mg	10mg	20mg	40mg	80mg	
<u>Pravastatin (SPC)</u> (3rd line statin if atorvastatin and rosuvastatin are inappropriate)		20%	24%	29%		
<u>Simvastatin (SPC)</u> (3rd line statin if atorvastatin and rosuvastatin are inappropriate)		27%	32%	37%	42%*	
<u>Atorvastatin (SPC)</u>		37%	43%	49%	55%	
<u>Rosuvastatin (SPC)</u>	38%	43%	48%	53% specialist initiation		
<u>Atorvastatin with Ezetimibe (SPC) 10mg</u>		52%	54%	57%	61%	
<u>Ezetimibe 10mg with Bempedoic acid 180mg (SPC)</u>	Approx. 38%*					*17-18% LDL-C lowering for bempedoic acid, ezetimibe 21% approximations vary in current study data.

Approval date: April 2025

Review date: April 2027 (or sooner if evidence or practice changes)

Not to be used for commercial or marketing purposes. Strictly for use within the NHS

# Recommended Criteria For Referral to Lipid Clinic (SEL Hospital and Community Settings)



Hospital lipid clinic	Referral Criteria	Community lipid service	Referral criteria (Lambeth, Southwark and Bexley boroughs)
<b>Severe hypercholesterolaemia</b>	Cholesterol >9.0 mmol/L (or non-HDL-C > 7.5 mmol/L) regardless of existing heart disease / family history	<b>Statin intolerance</b>	Intolerance of 3 or more statins OR Severe adverse reaction to one statin AND not meeting target reductions in LDL-C/ non-HDL-C on ezetimibe 10mg daily
<b>Suspected familial hypercholesterolaemia (FH)</b>	Cholesterol >7.5 mmol/L and LDL-C >5.0 mmol/L <b>AND</b> <ul style="list-style-type: none"> <li>Premature CVD (age &lt;60yrs) in the patient OR</li> <li>Family history: 1st degree relative MI &lt; 60 years old , 2nd degree relative MI &lt;50 years old OR</li> <li>Presence of tendon xanthomata</li> </ul>	<b>Secondary prevention of CVD</b>	Unable to meet target reductions in LDL-C or non-HDL-C despite maximal doses of statins + ezetimibe
<b>Family screening</b>	Cascade screening from identified patient with familial hypercholesterolaemia with a genetic diagnosis of FH	<b>Medicines adherence support</b>	Persistent non-adherence to drug therapies despite best efforts of the GP practice
<b>Severe Hypertriglyceridemia</b>	<ul style="list-style-type: none"> <li>Triglyceride &gt; 20 mmol/L OR</li> <li>Triglyceride 10 - 20 mmol/L which persists on a fasting lipid profile (2 samples 1 week apart) OR</li> <li>Triglyceride 4.5 - 9.9 mmol/L WITH non-HDL cholesterol &gt; 7.5 mmol/L</li> </ul>	<p>Please note the community clinic will also undertake follow up of specific patients reviewed in secondary care specialist lipids services and discharged with a management plan suitable for primary care.</p> <p>Currently community clinics run by GSTT are available in Lambeth, Southwark and Bexley boroughs.</p> <p>See <a href="#">here</a> for lipid clinic contact details</p>	
<b>Statin intolerance</b>	Intolerance of 3 or more statins OR Severe adverse reaction to one statin AND not meeting target LDL-C/ non-HDL-C on ezetimibe 10mg daily. For primary prevention statin intolerance please refer to community lipid clinic (where available) in the first instance.		
<b>Secondary prevention of CVD</b>	Unable to meet target reductions in LDL-C or non-HDL-C despite maximal doses of statins + ezetimibe		

**Not to be used for commercial or marketing purposes. Strictly for use within the NHS**

# Summary of Lipid Lowering Therapy

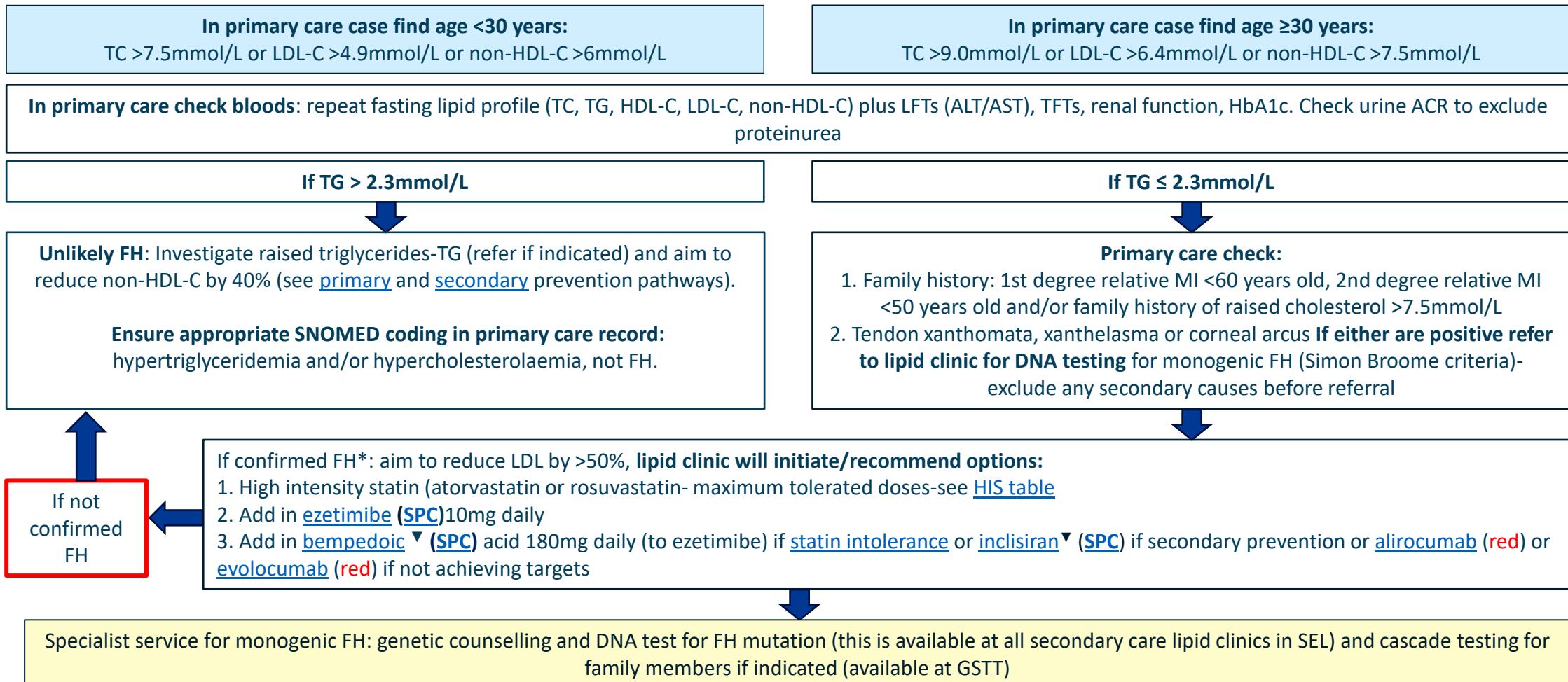
(\*CV events defined as death, non-fatal MI and non-fatal stroke)



Lipid lowering therapy	NICE approved indication	Administration	LDL – lowering effect	CV outcome data	LT safety data
<b>High intensity statin  <u>Atorvastatin (or Rosuvastatin) (Green)</u></b>	Primary prevention, Secondary prevention, Familial hypercholesterolaemia (FH)	Oral tablet given once daily	High intensity statins can lower LDL-C by 40% -55% (depending on agent and dose) <sup>8</sup>	Multiple outcome studies confirming CV outcomes benefit across a wide range of patient cohorts. For every 10,000 people treated for 5 years: <ul style="list-style-type: none"> <li>In secondary prevention (established CVD): 1,000 heart attacks, strokes or deaths avoided. NNT over 5 years = 10</li> <li>In primary prevention: 500 heart attacks, strokes or deaths avoided<sup>7</sup>. NNT over 5 years = 20</li> </ul>	Long term safety data has been well established over 30 years. For every 10,000 people treated for 5 years: 5 cases of myopathy 5-10 haemorrhagic strokes 50-100 new cases of diabetes <sup>9</sup>
<b>Ezetimibe (Green)</b>	With statin to reduce CV risk: primary and secondary prevention, or if statin intolerance, FH	Oral tablet given once daily	An additional LDL-C reduction of 24% in combination with statins <sup>10</sup>	Two CV outcomes studies in secondary prevention on top of statins <sup>11,12</sup> For every 10,000 people with CVD treated for 7 years: Approximately 200 major CV events* avoided. NNT 50 for preventing major cardiovascular event over 7 years. <sup>13</sup>	Long term safety data has been well-established over 20 years. Side effects are usually mild and transient <sup>14</sup> .
<b>Bempedoic acid ▼ (Amber1)  <u>Bempedoic acid with ezetimibe</u> ▼ (Green)</b>	With ezetimibe in statin intolerance if ezetimibe alone does not control LDL-C well enough	Oral tablet given once daily	An additional LDL-C reduction of approximately 28% (range 22-33%) when combined with ezetimibe <sup>15</sup>	One CV outcome study . For every 10,000 patients treated for 3 years. Approximately 130 major CV events* avoided. <sup>16</sup> NNT = 77	Safety data from trials of up to 3 years. Increased risk of hyperuricemia (NNH = 19) , gout (NNH = 100) and cholelithiasis (NNH = 100) reported. <sup>16</sup>
<b>Inclisiran (PCSK9i) ▼ (Amber1)</b>	Secondary prevention in patients who meet eligibility criteria	S/C injection administered every six months, once stabilised	An additional LDL-C reduction of approximately 50% (range 48-52%) alone or in combination with statins or ezetimibe <sup>17</sup>	No CV outcomes data. On-going studies due to report in 2026.	Short term safety data from trials of up to 2 years. Injection site reactions reported (NNH = 12).
<b>Icosapent ethyl ▼ (Amber 2)</b>	Secondary prevention in patients on statins who meet eligibility criteria	Two capsules taken orally twice daily with food	An 18% reduction in triglyceride levels when added to statin therapy	One CV outcomes study in secondary prevention. Given in addition to statin therapy. For every 10,000 people treated for 4.9 years approximately 370 major CV events would be avoided. NNT over 4.9 years =28 <sup>18</sup>	Safety data established in a trial over 5 years. Small increase in hospitalisation with atrial fibrillation / flutter (NNH = 100) and increased bleeding (NNH = 167) <sup>18</sup>
<b>PCSK9i (Alirocumab/ Evolocumab) (Red)</b>	Secondary prevention and FH in patients who meet eligibility criteria	SC injection every 2 weeks (can be self-administered)	An additional LDL-C reduction of approximately 50% (range 25-70%) alone or in combination with statins or ezetimibe. <sup>6,7</sup>	Two CV outcomes studies in secondary prevention on top of statins <sup>19,20</sup> For every 10,000 people treated for 2.5 years: Approximately 150 major CV events* avoided. NNT over 2.5 years = 65 <sup>21</sup>	Safety data has been established over 7 years . Injection site reaction reported (NNH - 167 <sup>19</sup> and 58 <sup>20</sup> ).

**Not to be used for commercial or marketing purposes. Strictly for use within the NHS**

# Familial Hypercholesterolaemia (FH) Pathway

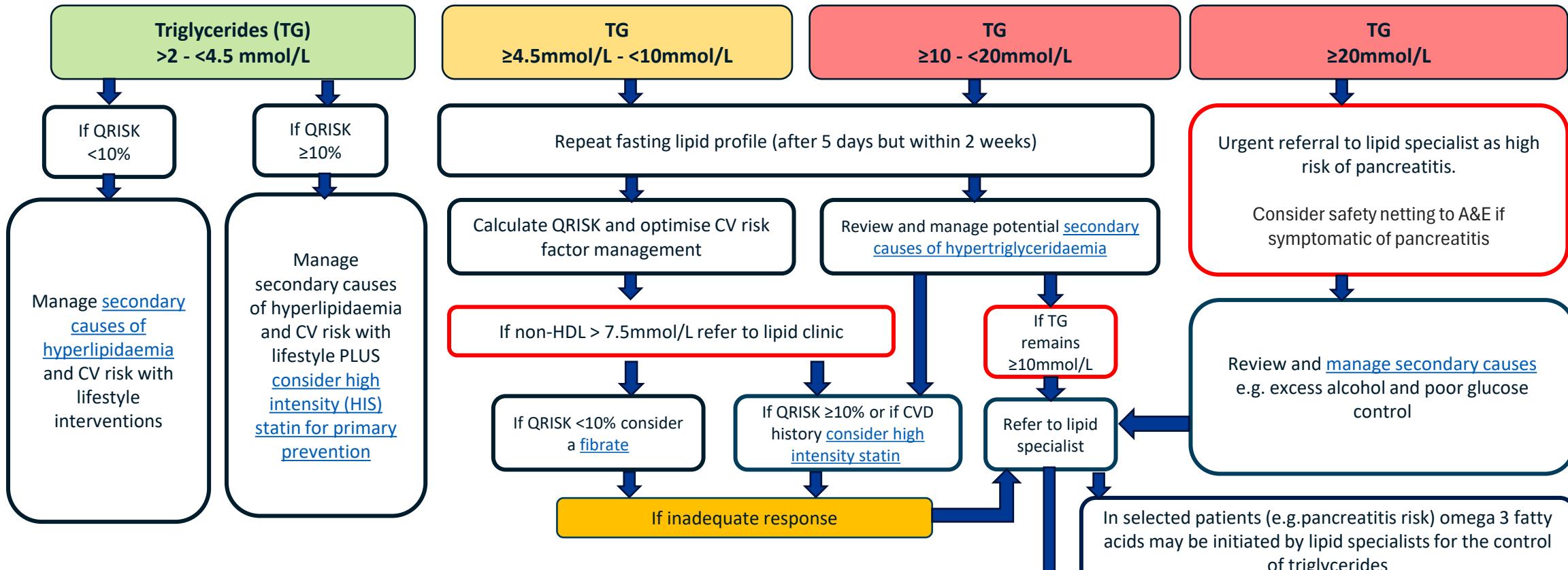


\*Ensure correct coding in primary care record for confirmed FH. SNOMED: familial hypercholesterolaemia: 398036000, homozygous FH 238078005, heterozygous FH 23807900, hypertriglyceridemia 302870006

**Not to be used for commercial or marketing purposes. Strictly for use within the NHS**

# Guidance for the Management of Hypertriglyceridaemia

In all cases address any secondary causes and give appropriate lifestyle advice



In patients with a CVD history, fasting TG>1.7mmol/L (or non-fasting TG >2.1mmol/L) and LDL-C 1.04 to 2.6mmol/L, cardiovascular, diabetes and lipid specialists may consider adding icosapent ethyl (SPC) to HIS therapy NICE TA

# Management of Triglycerides

## Address possible secondary causes and appropriate lifestyle interventions **before referral to lipid clinic:**

Excessive alcohol intake (e.g. >40 units/week), poorly controlled/new diabetes (e.g. HbA1c >53mM/M), TG – raising medication (e.g. steroids), hypothyroidism (e.g. TSH >15), Metabolic Dysfunction-Associated Steatotic Liver Disease (see [guidance](#)) - assess risk of advanced liver fibrosis: Fibrosis (FIB) 4 [score](#) (refer to hepatology), acute/chronic liver disease (e.g. ALT >55), renal disease (e.g. CKD 3), obesity, smoking

### Fibrate therapy:

Such as fenofibrate 160mg daily [SPC](#) (if contra-indicated or not tolerated seek specialist advice)

- **Discontinue:** if Cr increase >50% (adjust dose as per SPC) and if ALT/AST >3xULN
- **Check CK if muscular symptoms:** The combination of fibrate with statin increases risk of myopathy

### Icosapent ethyl therapy (SPC):

Recommended by [NICE](#) for patients with CVD (secondary prevention) in combination with statin therapy where fasting TG >1.7mmol/L and LDL-C > 1.0mmol/L and ≤ 2.6mmol/L. In SEL this is **amber 2** - initiation by and first prescription from a cardiovascular, diabetes or lipid specialist followed by primary care prescribing.

- **Cautions (SPC):** avoid in patients prescribed dual antiplatelets or an antiplatelet with an anticoagulant- refer to [CRUSADE](#) score for post-MI bleeding risk or [ORBIT](#) bleeding risk score for AF to assess individual risk: benefits. [MHRA alert](#)
- **Adherence:** In order for this medication to be effective it must be taken as prescribed and so adherence and tolerability should be monitored at each review. If patients cannot take 2 capsules twice a day, then STOP therapy. Pulse checks are also recommended at each review to identify potential AF, refer for ECG if indicated and manage associated stroke risk if AF is diagnosed.

**Not to be used for commercial or marketing purposes. Strictly for use within the NHS**

# Resources/supporting materials

- The UCLPartners search and stratification tools, part of the UCLPartners [Proactive Care Frameworks](#), stratify patients with high impact conditions so that care may be optimised according to clinical priority and capacity, see below for some useful links:
  - UCLPartners Proactive Care Search and Stratification tools- Register [here](#)
  - [Cholesterol search tool](#)
  - [Familial hypercholesterolaemia](#)
  - [Size of the Prize for cholesterol](#)
- **PrescQIPP and SEL supporting materials:**
  - [Deprescribing statin algorithm](#) (registration required)
  - [SEL lipid management webinars](#)
  - [PrescQIPP lipid modification e-learning](#) (registration required)
  - [Bempedoic FAQ](#)

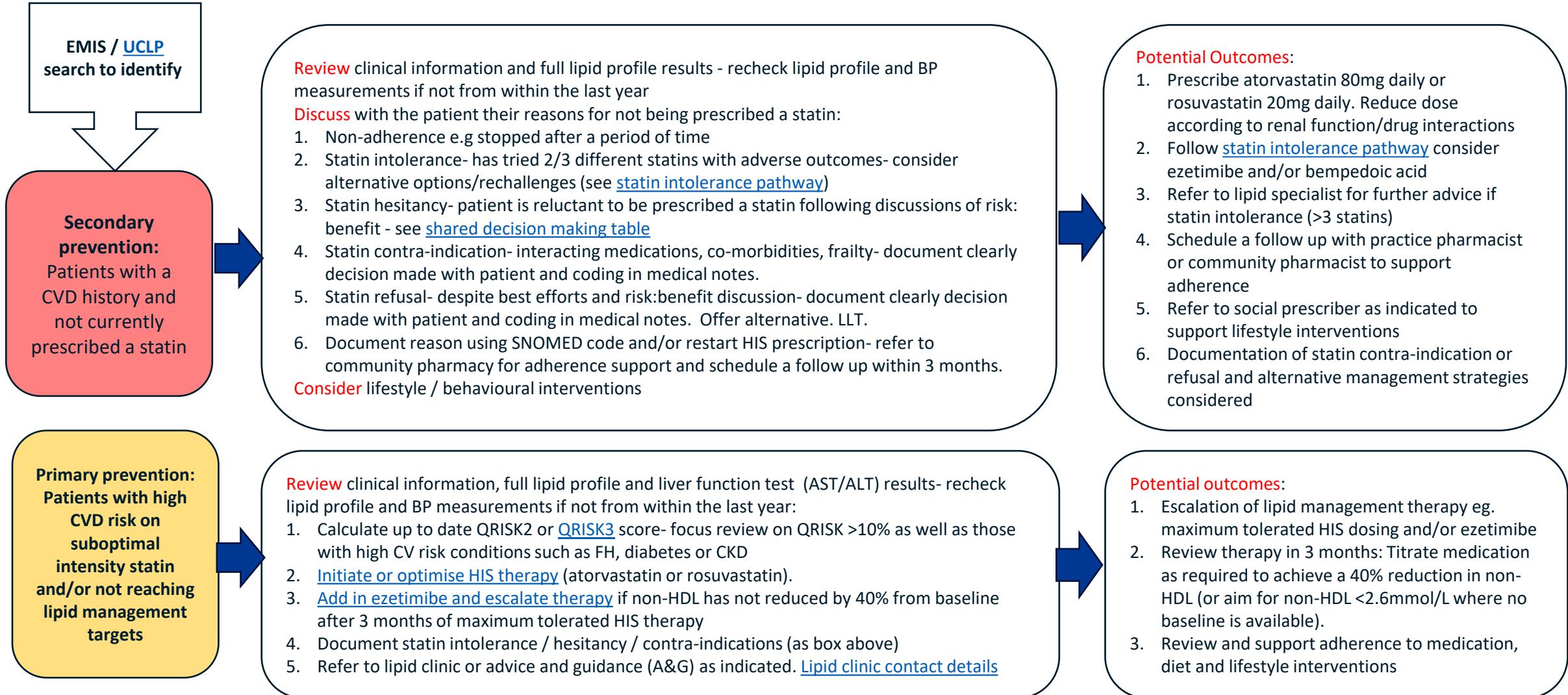
Approval date: April 2025

Review date: April 2027 (or sooner if evidence or practice changes)

Not to be used for commercial or marketing purposes. Strictly for use within the NHS

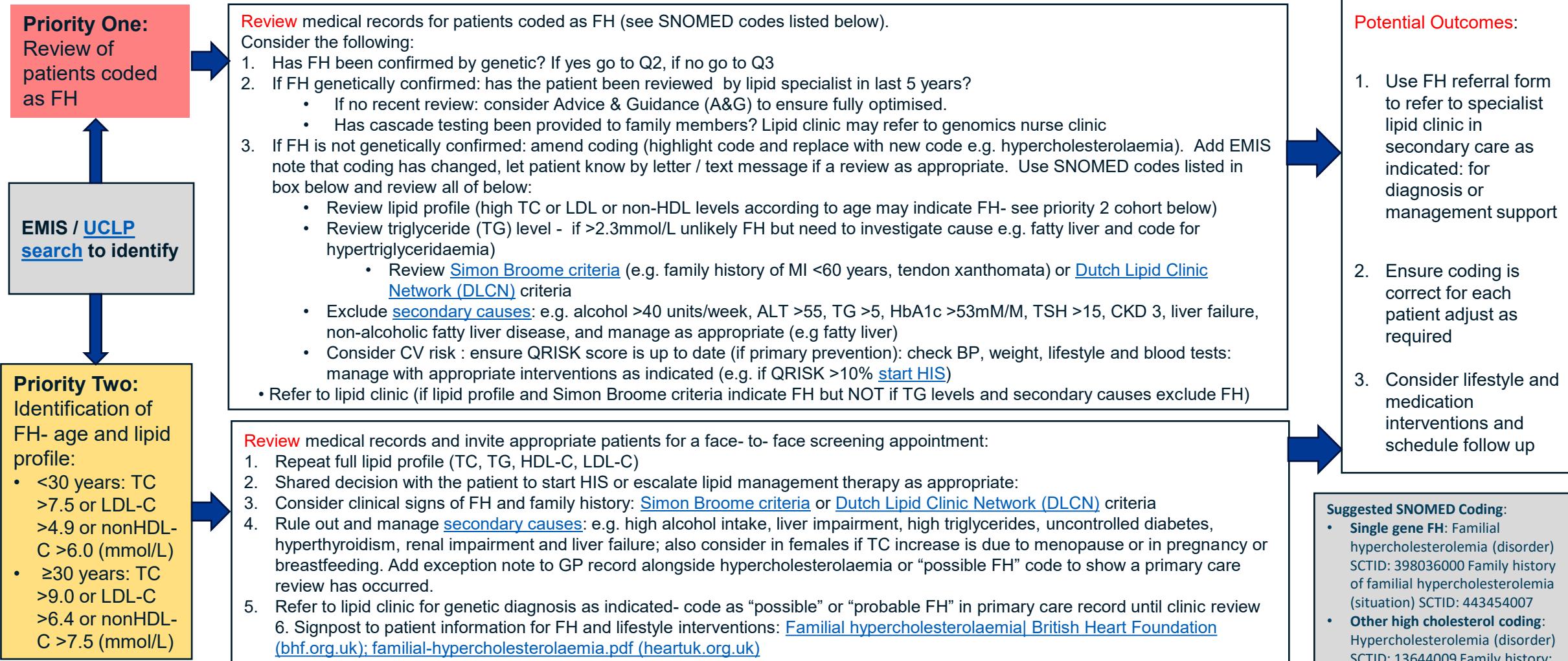
South East London Integrated Medicines Optimisation Committee (SEL IMOC). A partnership between NHS organisations in South East London Integrated Care System: NHS South East London (covering the boroughs of Bexley/Bromley/Greenwich/ Lambeth/Lewisham and Southwark) and GSTFT/KCH /SLaM/ Oxleas NHS Foundation Trusts and Lewisham & Greenwich NHS Trust

# Optimising lipid management for patients in primary care: Supporting a review of priority cohorts in secondary and primary prevention of CVD



**Not to be used for commercial or marketing purposes. Strictly for use within the NHS**

# Familial Hypercholesterolaemia (FH) review in primary care: Supporting identification, diagnosis, management and coding



Approval date: April 2025

Review date: April 2027 (or sooner if evidence or practice changes)

**Not to be used for commercial or marketing purposes. Strictly for use within the NHS**

# SEL Lipid Specialist Services and Contact Details



**Before referral to lipid clinic: Identify and address potential secondary causes of hyperlipidaemia, such as uncontrolled diabetes mellitus, obesity, excess alcohol consumption, untreated hypothyroidism, proteinuria and some medications, for example, thiazide diuretics, ciclosporin, steroids and antipsychotics:**

SEL Lipid Clinic	Lipidologist for referrals	Contact Details
GSTT	Prof AS Wierzbicki/Prof MA Crook	Via eRS or <a href="mailto:gst-tr.diabetesandendocrine@nhs.net">gst-tr.diabetesandendocrine@nhs.net</a>
KCH	Dr Nandini Rao	Via eRS or to book an appointment/query re appointment/blood test request forms Tel: 02032994181 or email: <a href="mailto:Laura.Gonzalez@nhs.net">Laura.Gonzalez@nhs.net</a>
PRUH	Dr Nandini Rao	Via eRS or <a href="mailto:kch-tr.br-referrals@nhs.net">kch-tr.br-referrals@nhs.net</a>
LGT	Prof MA Crook	Via eRS or <a href="mailto:tlh-tr.LewishamReferrals@nhs.net">tlh-tr.LewishamReferrals@nhs.net</a> or endocrinology at QEH: lipidology clinics at the Bromley diabetes centre, Outpatients QEH: Tel 02088364969
Community	Lambeth, Southwark and Bexley boroughs	Via eRS and/or email: <a href="mailto:gst-tr.KHPCommunityCVD@nhs.net">gst-tr.KHPCommunityCVD@nhs.net</a>

The aim of hospital and community clinics is to focus on patients with primary hyperlipidaemia, **before referral please exclude:**

- For hypercholesterolaemia **exclude** hypothyroidism (check TSH), chronic renal disease or nephrotic syndrome, variant diets (zero carbohydrate; protein supplements)
- For **hypertriglyceridaemia** **exclude** new/uncontrolled diabetes (check HbA1c), excess alcohol intake and fatty liver (may require referral to gastro if FIB-4 score indicates)
- For suspected familial hypercholesterolaemia **exclude** secondary causes and refer to the hospital based lipid clinic not the community clinic.

Approval date: April 2025

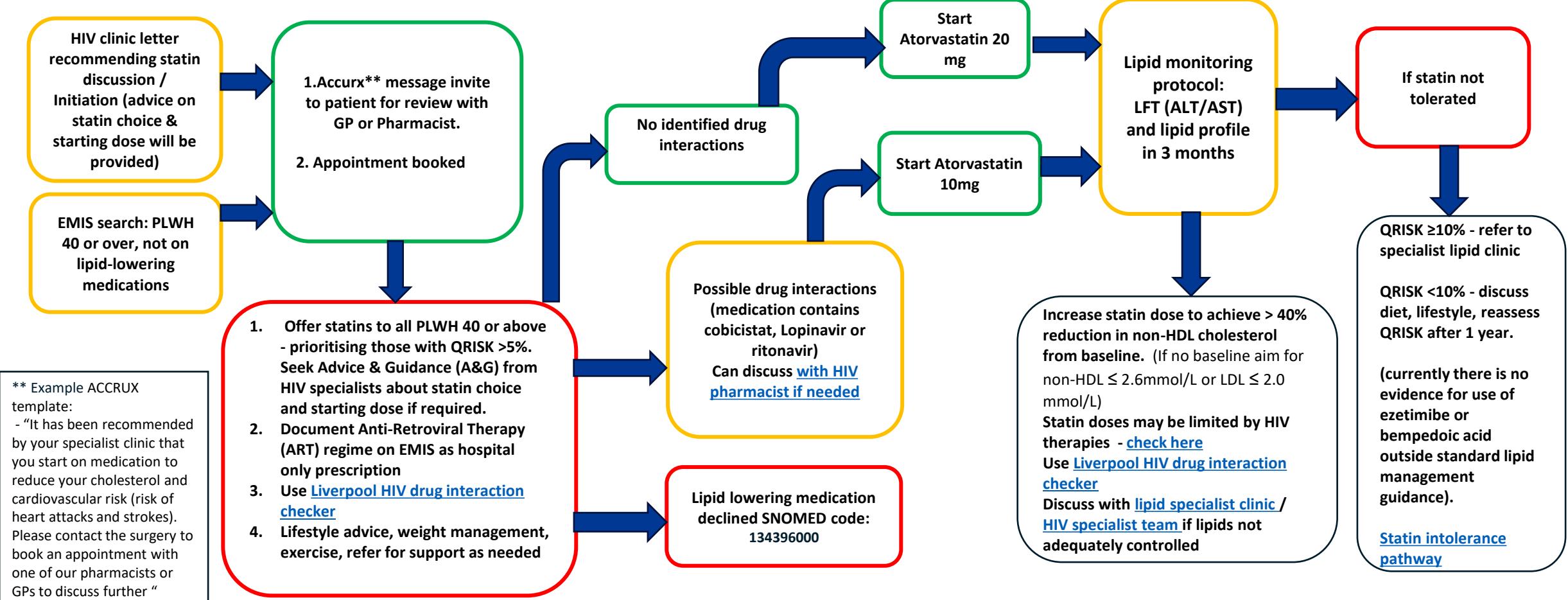
Review date: April 2027 (or sooner if evidence or practice changes)

**Not to be used for commercial or marketing purposes. Strictly for use within the NHS**

South East London Integrated Medicines Optimisation Committee (SEL IMOC). A partnership between NHS organisations in South East London Integrated Care System: NHS South East London (covering the boroughs of Bexley/Bromley/Greenwich/ Lambeth/Lewisham and Southwark) and GSTFT/KCH /SLaM/ Oxleas NHS Foundation Trusts and Lewisham & Greenwich NHS Trust

# Statin Initiation for Primary Prevention for People Living with HIV (PLWH) 40 years and above\*

\*adapted from Statin Initiation for Primary Prevention for PLW HIV over 40 years  
created by multiple SEL GP HIV champions and Dr. Hamlyn



Approval date: April 2025

Review date: April 2027 (or sooner if evidence or practice changes)

**Not to be used for commercial or marketing purposes. Strictly for use within the NHS**

# Common Statin/ARV Interactions and Recommended Doses for PLWH



For further information and advice about interactions please see: <https://www.hiv-druginteractions.org/checker> or seek Advice & Guidance from [HIV Specialist team](#)

ARV Regimen	Effect on Statins	Recommended atorvastatin starting dose	Maximum atorvastatin dose	Recommended rosuvastatin starting dose	Maximum rosuvastatin dose
Ritonavir- or cobicistat-boosted darunavir	Increased atorvastatin and rosuvastatin concentrations.	10mg	40mg	5mg	20mg
Ritonavir- or cobicistat-boosted elvitegravir	Increased atorvastatin and rosuvastatin concentrations.	10mg	40mg	5mg	20mg
Ritonavir- or cobicistat-boosted atazanavir	Significantly higher atorvastatin and rosuvastatin levels.	10mg	10mg	5mg	10mg
Lopinavir/ritonavir	Significantly higher atorvastatin and rosuvastatin levels.	10mg	20mg	5mg	10mg
Efavirenz	Variable reductions in atorvastatin. Rosuvastatin preferred first line.	20mg	80mg	10mg	40mg
Other ARV regimens	See <a href="https://www.hiv-druginteractions.org/checker">https://www.hiv-druginteractions.org/checker</a> or seek Advice & Guidance from <a href="#">HIV Specialist team</a>				

**Please note some antiretrovirals, such as boosted protease inhibitors (e.g. darunavir/ritonavir/cobicistat/atazanavir) and efavirenz can increase lipids, while others are more lipid-friendly. Consider referring patients with persistently elevated lipids to their HIV clinic for optimisation of their antiretroviral regimen.**

Standard dosing of Ezetimibe is advised for all ARV regimes.

Approval date: April 2025

Review date: April 2027 (or sooner if evidence or practice changes)

**Not to be used for commercial or marketing purposes. Strictly for use within the NHS**

# Contact Details for HIV Pharmacy Teams

Trust	HIV Pharmacy Team
KCH PRUH	0203 299 3851 <a href="mailto:kch-tr.sexualhealth.pharmacists@nhs.net">kch-tr.sexualhealth.pharmacists@nhs.net</a>
GSTT	020 7188 2618 (option 2) <a href="mailto:gst-tr.hw.pharmacy@nhs.net">gst-tr.hw.pharmacy@nhs.net</a>
Lewisham Greenwich Bexley	02083333000, Extn 48603 02031926752 <a href="mailto:Lh.alexisclinic@nhs.net">Lh.alexisclinic@nhs.net</a>  02088366206 <a href="mailto:Lg.trafalgarpatientqeh@nhs.net">Lg.trafalgarpatientqeh@nhs.net</a>

For further guidance:

[Home - REPRIEVE Trial](#)

[BHIVA-rapid-guidance-on-the-use-of-statins.pdf](#)

Approval date: April 2025

Review date: April 2027 (or sooner if evidence or practice changes)

**Not to be used for commercial or marketing purposes. Strictly for use within the NHS**

# Glossary

## Abbreviations used for lipid profiles:

- TC: total cholesterol
- TG: triglycerides
- HDL-C: high density lipoprotein-cholesterol
- LDL-C: low density lipoprotein cholesterol
- Non-HDL-C: non-high density lipoprotein cholesterol

Calculating non-HDL-C  
non-HDL-C = total cholesterol - HDL cholesterol

- mAB: monoclonal antibody
- FH: familial hypercholesterolaemia
- ICS: integrated care system
- CV: cardiovascular
- CVD: cardiovascular disease
- LFTs: liver function tests
- DM: diabetes mellitus
- CKD: chronic kidney disease
- BP: blood pressure
- HIS: high intensity statin
- AST/ALT: aspartate aminotransferase/alanine transaminase
- ULN: upper limit of normal
- TSH: thyroid stimulating hormone
- Cr: creatinine
- CK: creatine kinase
- ECG: electrocardiogram
- AF: atrial fibrillation
- PCSK9i: proprotein convertase subtilisin/kexin type 9 inhibitors
- CrCl: creatinine clearance
- NNH: number needed to harm
- NNT: number needed to treat

Approval date: April 2025

Review date: April 2027 (or sooner if evidence or practice changes)

**Not to be used for commercial or marketing purposes. Strictly for use within the NHS**

# References

1. Lancet 2007;370:1829–39. Lewington S et al; Blood cholesterol and vascular mortality by age, sex, and blood pressure: a meta-analysis of individual data from 61 prospective studies with 55,000 vascular deaths: [Blood cholesterol and vascular mortality by age, sex, and blood pressure: a meta-analysis of individual data from 61 prospective studies with 55 000 vascular deaths - The Lancet](#)
2. JAMA. 2016;316(12):1289-1297. Silverman M G et al; Association Between Lowering LDL-C and Cardiovascular Risk Reduction Among Different Therapeutic Interventions A Systematic Review and Meta-analysis: <https://jamanetwork.com/journals/jama/fullarticle/2556125>
3. NICE CG71: Familial hypercholesterolaemia: identification and management; August 2008, updated Oct 2019: <https://www.nice.org.uk/guidance/cg71/chapter/Context>
4. NICE NG238: Cardiovascular disease: risk assessment and reduction, including lipid modification; December 2023: <https://www.nice.org.uk/guidance/NG238>
5. BHIVA rapid guidance on the use of statins for primary prevention of cardiovascular disease in people living with HIV v2; March 2024 [BHIVA-rapid-guidance-on-the-use-of-statins.pdf](#)
6. NICE TA393; Alirocumab for treating primary hypercholesterolaemia and mixed dyslipidaemia, Published: 22 June 2016: <https://www.nice.org.uk/guidance/ta393>
7. NICE TA394; Evolocumab for treating primary hypercholesterolaemia and mixed dyslipidaemia, Published: 22 June 2016: <https://www.nice.org.uk/guidance/ta394>
8. NICE CG181; Cardiovascular disease: risk assessment and reduction, including lipid modification, Published July 2014: <https://www.nice.org.uk/guidance/cg181/chapter/1-recommendations>
9. Lancet 2016; 388:2532-61; R Collins et al; Interpreting the evidence for the efficacy and safety of statin therapy; [https://www.thelancet.com/pdfs/journals/lancet/PIIS0140-6736\(16\)31357-5.pdf](https://www.thelancet.com/pdfs/journals/lancet/PIIS0140-6736(16)31357-5.pdf)
10. NICE TA385; Ezetimibe for treating primary heterozygous-familial and non-familial hypercholesterolaemia, Published: 24 February 2016: <https://www.nice.org.uk/guidance/ta385>
11. N Engl J Med 2015; 372:2387-2397; Cannon C P et al; Ezetimibe added to statin therapy after acute coronary syndromes: <https://www.nejm.org/doi/full/10.1056/NEJMoa1410489>
12. N Engl J Med 2020; 382:9-19; Amarenco P D et al; A Comparison of Two LDL Cholesterol Targets after Ischemic Stroke: [https://www.nejm.org/doi/10.1056/NEJMoa1910355?url\\_ver=Z39.88-2003&rfr\\_id=ori:rid:crossref.org&rfr\\_dat=cr\\_pub%20%20pubmed](https://www.nejm.org/doi/10.1056/NEJMoa1910355?url_ver=Z39.88-2003&rfr_id=ori:rid:crossref.org&rfr_dat=cr_pub%20%20pubmed)
13. Can Fam Physician 2015; 61 (3): 251; Turgeon R D et al; Does ezetimibe modify clinical outcomes?: <https://www.cfp.ca/content/61/3/251.long>
14. Lancet. 2022 Jul 30;400(10349):380-390. Kim B K et al; Long-term efficacy and safety of moderate-intensity statin with ezetimibe combination therapy versus high-intensity statin monotherapy in patients with atherosclerotic cardiovascular disease (RACING): a randomised, open-label, non-inferiority trial: [Long-term efficacy and safety of moderate-intensity statin with ezetimibe combination therapy versus high-intensity statin monotherapy in patients with atherosclerotic cardiovascular disease \(RACING\): a randomised, open-label, non-inferiority trial - The Lancet](#)
15. NICE TA694; Bempedoic acid with ezetimibe for treating primary hypercholesterolaemia or mixed dyslipidaemia, Published: 28 April 2021: <https://www.nice.org.uk/guidance/ta694>
16. N Engl J Med 2023; 388:1353 -1364. Nissen S E et al; Bempedoic Acid and Cardiovascular Outcomes in Statin- Intolerant Patients: <https://www.nejm.org/doi/full/10.1056/NEJMoa2215024>
17. NICE TA733: Inclisiran for treating primary hypercholesterolaemia or mixed dyslipidaemia; Published: 06 October 2021 <https://www.nice.org.uk/guidance/TA733>
18. N Engl J Med 2019; 380:11 - 22. Bhatt D L et al; Cardiovascular Risk Reduction with Icosapent Ethyl for Hypertriglyceridemia: <https://www.nejm.org/doi/full/10.1056/nejmoa1812792>
19. N Engl J Med 2017; 376:1713-1722. Sabatine et al; Evolocumab and Clinical Outcomes in Patients with Cardiovascular Disease: <https://www.nejm.org/doi/full/10.1056/NEJMoa1615664>
20. N Engl J Med 2018; 379:2097-2107. Schwarz GG et al. 2018; Alirocumab and Cardiovascular Outcomes after Acute Coronary Syndrome: <https://www.nejm.org/doi/full/10.1056/NEJMoa1801174>
21. Can Fam Physician 2018; 64 (9): 669; Kolber M R et al; Do PCSK9 inhibitors reduce cardiovascular events?: <https://www.cfp.ca/content/64/9/669.long>

Approval date: April 2025

Review date: April 2027 (or sooner if evidence or practice changes)

Not to be used for commercial or marketing purposes. Strictly for use within the NHS