



# Implementing lipid optimisation through prescribing strategies to reduce cardiovascular risk

Case studies

Published: 16 April 2026

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# Contents

Overview .....	3
Prescribing quality scheme .....	4
Outcomes and learning .....	6
Outcomes .....	6
Learning .....	7
Supporting information .....	9
Quotes .....	9
Contact details .....	9

## Overview

**Organisation:** Buckinghamshire, Oxfordshire and Berkshire West integrated care board (BOB ICB)

**Organisation type:** NHS integrated care board

Cardiovascular disease (CVD) is the leading cause of morbidity, disability and mortality in England. It is a major driver of health inequalities and a key priority, as highlighted in the [NHS Long Term Plan](#) and the recent [NHS 10 Year Health Plan](#). Optimising lipid management for CVD prevention has also been highlighted in the [NHS England Medicines Optimisation Opportunities 2024/25 guidance](#) and is a [Core20PLUS5](#) health inequalities clinical area.

70% of CVD is estimated to be preventable through healthy lifestyle choices, improved detection and treatment of risk factors. Optimising treatment of high cholesterol can prevent heart attacks and strokes, with every 1 mmol/L reduction in low-density lipoprotein (LDL) cholesterol reducing the risk of major vascular events by 22% to 25% after 1 year. Chronic kidney disease (CKD) is also strongly associated with CVD. For every 100 patients with moderate-to-severe CKD, there are 6 cardiovascular events per year.

Following the introduction of [NICE technology appraisals on bempedoic acid and inclisiran](#) in 2021 and the subsequent updates of the [NHS national guidance for lipid management](#) to take account of [NICE's guideline on cardiovascular disease](#), the lipid management pathways across Buckinghamshire, Oxfordshire and Berkshire West (BOB) were reviewed to ensure alignment. The BOB integrated care board (ICB) serves a population of approximately 1.8 million people.

National guidance had undergone significant revision to simplify treatment escalation and support clinicians to use high-intensity statins as first-line therapy. A stepwise approach using ezetimibe, PCSK9 inhibitors, bempedoic acid and inclisiran supports people at high-risk to reach lipid targets and reduce heart attacks or strokes. Local prescribing data on high-intensity statins highlighted the need for improvement.

The need for a systematic, scalable approach led the medicines optimisation team,

working with the BOB system integrated cardiac delivery network (ICDN), to focus on lipid optimisation in primary care through the prescribing quality scheme. The BOB long-term conditions ICDN works collaboratively with a range of partners, including NHS trusts, local authorities and Health Innovation Oxford and Thames Valley, with the aim of CVD prevention and reducing inequalities through co-designing integrated pathways.

## Prescribing quality scheme

The BOB ICB medicines optimisation team have run an annual ICB-wide scheme since August 2022. The scheme supports primary care to embed evidence-based, safer prescribing aligned to national priorities and guidance to improve the outcomes for patients.

Across 3 years (2022 to 2025), the scheme included annual CVD-focused targets relating to lipid optimisation on high-intensity statins and support inappropriate escalation through the lipid management pathway.

### Primary prevention (2022 to 2023, Year 1):

- Identified patients with QRISK higher than 20% taking low- or medium-intensity statins.
- Practices reviewed patients to determine appropriateness of switching to a high-intensity statin.

### Secondary prevention (2023 to 2024, Year 2):

- Identified patients aged under 80 years prescribed a suboptimal statin (simvastatin, fluvastatin or pravastatin).
- Practices reviewed and optimised therapy to high-intensity statins or maximum tolerated doses.

### Primary prevention in CKD (2024 to 2025, Year 3):

- Identified patients aged 18 to 75 with coded CKD stage 3 not currently prescribed any lipid-lowering therapy.
- Practices reviewed and initiated treatment where clinically appropriate.

To support the prescribing quality scheme, the medicines optimisation team:

- developed resource packs required to undertake the target, including clinical system searches, clinical background guidance and audit templates
- signposted to shared decision-making tools to support patient conversations with a shared decision-making approach
- ran primary care educational sessions with specialist clinicians at scheme launch. Alongside these sessions, the BOB system cardiac network also supported workforce training through a series of lipid management webinars
- enabled clinical decision support tool messages, which support lipid optimisation pathways
- reviewed all anonymised evidence submitted by the practices and offered guidance and support where required. The learning outcomes were reported back to the cardiac network to inform the development of further system work to support CVD prevention.

The scheme was complemented by broader work carried out within the medicines optimisation team and through the cardiac network, which included:

- a single BOB integrated care system (ICS) lipid modification guideline to reflect [NICE's guideline on cardiovascular disease](#) and the [national lipid pathway](#), with subsequent updates to support prescribing decisions
- resources for clinicians, including an inclisiran primary care resource pack for practices, and an inclisiran patient information leaflet to aid discussions between people and their healthcare professional
- the development of a locally enhanced service which included inclisiran administration
- delivering a series of lipid management webinars to support lipid optimisation
- a series of [animated cholesterol videos and leaflets](#), translated into 6 languages. This was developed by Health Innovation Oxford and Thames Valley with patients and clinicians, with collaborators including Heart UK and NHS England.

# Outcomes and learning

## Outcomes

### Impact on patients

From reviewing the scheme data, in total between 2022 to 2025:

- 12,206 patient reviews were carried out by 368 GP practices
- 4,506 patients (37%) had lipid therapy optimised
- consistent results were seen across all 3 BOB sub-ICB places.

Primary care prescribing data shows that the prescribing of low- and medium-intensity statins across BOB significantly reduced during the scheme period, which continues to be sustained. See [OpenPrescribing data on low- and medium-intensity statins](#).

The national CVDPREVENT primary care data ([CVDPREVENT regional and ICS insights](#)) shows improvement on lipid-lowering therapy for:

- Patients with no GP-recorded CVD and a GP-recorded QRISK score of 20% or more, who are currently treated with lipid-lowering therapy.
- Patients with GP-recorded CVD (narrow definition), who are currently treated with lipid-lowering therapy.
- Patients with GP-recorded chronic kidney disease (G3a to G5), who are currently treated with lipid-lowering therapy. The prescribing scheme only covered those with CKD stage 3.

### Financial impact

Evidence shows that every 1 mmol/L reduction in LDL cholesterol delivers a 22% reduction in major vascular events after 1 year. Clinical modelling shows substantial potential impact on reducing future cardiovascular events and therefore also a potential financial saving of £1.3 million to £2.5 million over 3 years.

The [UCLPartners Size of the Prize](#) is an evidence-based initiative demonstrating that optimising the management of high blood pressure and cholesterol can prevent thousands of heart attacks and strokes in England, saving millions in NHS costs. CVDPREVENT is the data source for the Size of the Prize resource.

Baseline data for people with recorded CVD currently treated with lipid-lowering therapy for BOB ICB (March 2022) showed achievement at 80.2%. By June 2025, this had increased to 84% achievement. If the ICB continues to improve on this trajectory and achieves 86%, this could prevent 73 cardiovascular events and 9 deaths over a 3-year period. The associated potential savings to the NHS would range between £1,100,300 to £1,767,403.

## Learning

The coordinated work on CVD, with a lipid focus, has helped positively influence prescribing behaviour and confidence, which should reduce the number of cardiovascular events.

Analysis of the prescribing schemes have identified the following key themes.

### Operational barriers

- Difficulty contacting patients.
- Movement between care settings disrupting follow up.
- Missing or delayed blood tests.

### Patient-related factors

- Declining optimisation due to preference for current medication, fear of or previous side effects, or preference for lifestyle changes first.
- Limited understanding of cholesterol and CVD risk and uncertainty about therapy.
- Complexity in frail or multimorbid patients influencing appropriateness of changes.
- Non-engagement or requests for repeated monitoring before making decisions.

### Clinical factors

- Variation in familiarity with national guidance, including updated statin intolerance pathways.
- Significant drug interactions not managed.
- Need for clearer awareness that CKD confers high CVD risk regardless of QRISK score.
- Complex cases requiring specialist review or affected by other health conditions.

### **Optimisation patterns**

- Shift from 'fire and forget' approach with atorvastatin 20 mg; rosuvastatin used more for intolerance.
- Growing prescribing of ezetimibe or bempedoic acid and referrals to lipid clinics.
- Variation in statin dose titration, especially in secondary prevention.
- Shift from total cholesterol to non-HDL/LDL cholesterol target-based optimisation.

The learnings from the prescribing schemes have been fed back to the system cardiac network to inform and align with the joint forward plan for CVD.

## Supporting information

See the following resources for more information:

- [Quality and outcomes framework guidance for 2023/24, Version 2, January 2024](#)
- [Nitsch D, Caplin B, Hull SA, et al. \(2017\) National Chronic Kidney Disease Audit: National Report \(Part 1\). Healthcare Quality Improvement Partnership \(HQIP\)](#)
- [BOB ICB lipid modification guideline \(PDF\)](#)
- [BOB ICB primary care inclisiran resource pack \(PowerPoint\)](#)
- [BOB ICB inclisiran patient information leaflet \(PDF\)](#)

## Quotes

"We have worked with primary care healthcare professionals to highlight the range of cholesterol treatments available and how they can help their patients better understand their risk factors and manage their cholesterol levels through treatment plans more effectively."

Janice Craig, Medicines Optimisation Lead Pharmacist, BOB ICB.

"We have worked closely with the Health Innovation Network (HIN) and made a particular effort to reach people who might be at risk of CVD and not yet receiving help. The HIN has created leaflets, posters and videos. We have shared this far and wide, from being played in GP surgeries to mental health teams. We have translated leaflets into other languages spoken in our area."

Dr Heike Veldtman, GP and CVD Lead, BOB ICB.

## Contact details

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ISBN: 978-1-4731-9441-0