

The AHSN Network

The AAC/AHSN Lipid Optimisation & Familial Hypercholesterolaemia National Programme

**Final Impact Report
October 2020 - March 2023**

Implementing the NICE endorsed national guidance for lipid management and secondary prevention of CVD through: An AHSN led national delivery model.

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Executive Overview

The AAC/AHSN Lipid Optimisation & Familial Hypercholesterolaemia National Programme



Professor Julia Newton

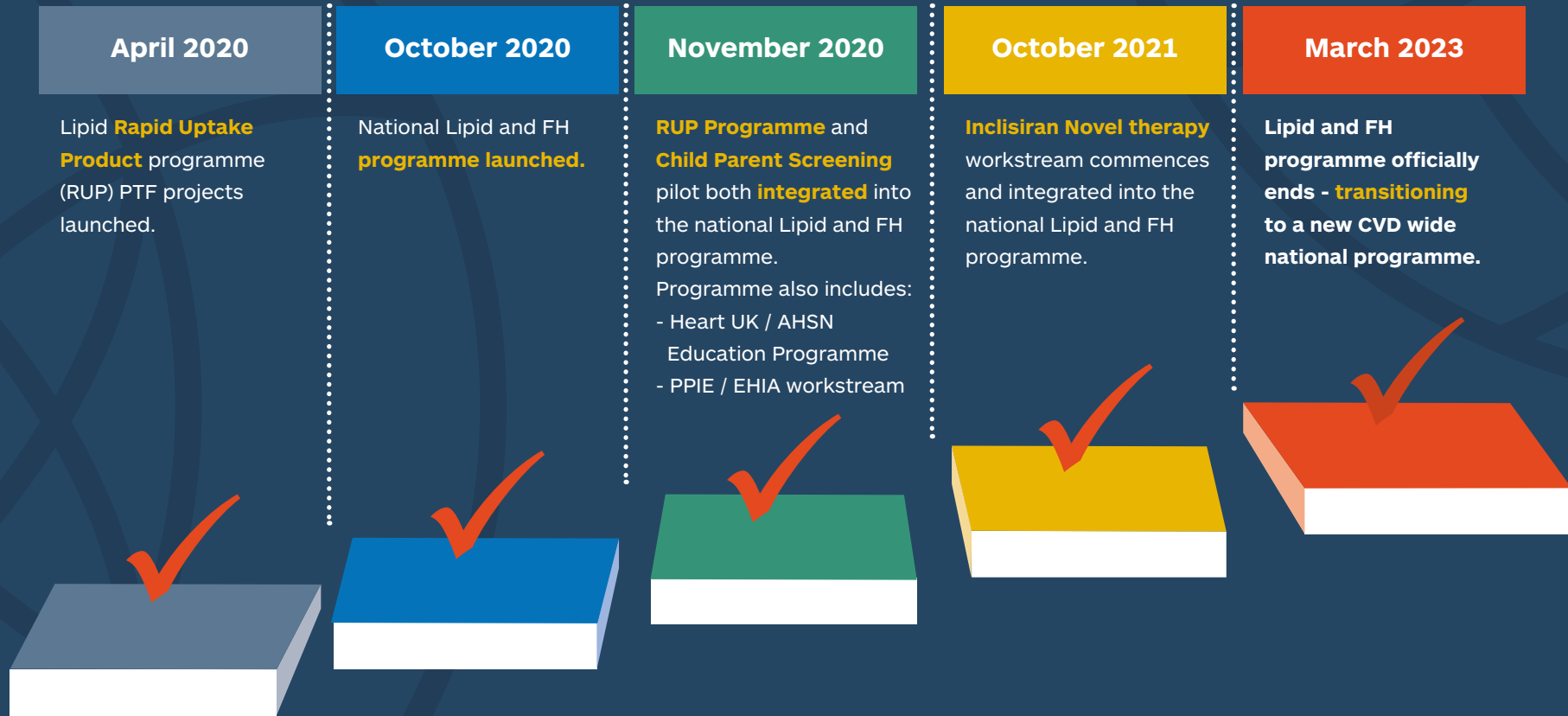
Medical Director
AHSN NENC

It has been an absolute pleasure to work with the 15 AHSN CVD teams over the last 2.5 years. We are very proud of all we have achieved, tasters of which you will read about in this document. It's been quite a journey, but one where we are confident we have made a real difference to a huge number of patients, raised awareness with clinical teams and the public, and developed relationships that will continue to enhance lipid management for many generations to come.

What started off as a programme focussed upon detection of those with familial hypercholesterolaemia (FH), soon evolved into much more than that, recognising the importance of cholesterol in cardiovascular risk, and the opportunities to improve lipid management even in those without FH. After a year, we absorbed the ongoing rapid uptake product lipid programme of PCSK9i which had until then run in parallel, allowing us to truly adopt and spread a whole pathway approach to lipid management. Within that same year the approval of Inclisiran and the role of the AHSN Network in the implementation of this novel technology really shone a light on our programme and the importance of optimising lipid management if we are to reduce CVD prevalence and the associated health inequalities.

You will read in this document, some of the wonderful achievements that the 15 AHSN CVD teams have supported over the lifetime of this programme. It is by no means exhaustive, and there is a lot more that we could not find space for. This is an opportunity for us all to celebrate what we have done collectively over the last 2.5 years. We don't know about you, but we've learnt a lot...

■ Programme Key Milestones since Inception



Clinical Advisory Group **continual review** of the national **NICE endorsed Lipid and FH Management Pathway Guidelines** to enhance its Spread and Adoption

KEY: Timeline for NICE led guideline review dates



Meet the Team

The National Lipid and FH Programme team led by Prof Julia Newton, is made up with individuals from various AHSN regions bringing a diverse range of knowledge and expertise into the national programme.



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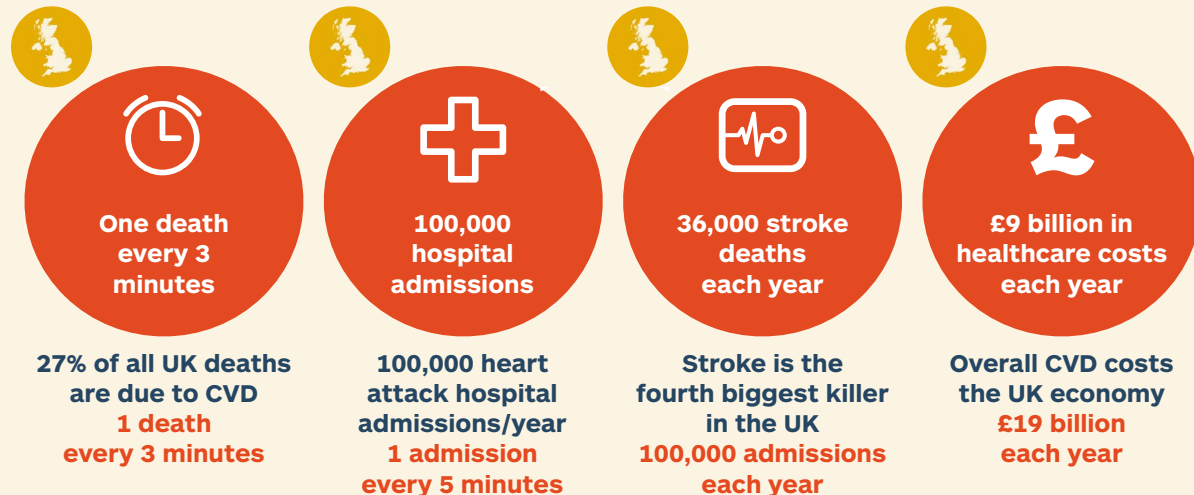
Preventing and Supporting the Management of CVD: Scale of our Challenge

Cardiovascular Disease (CVD) is a condition that affects an estimated seven million people within the UK. As well as being the major cause of excess mortality even after the pandemic, CVD adds astronomical costs to our economy each year and remains the biggest cause of death and disability in the UK.

In relation to the local health systems in England, the prevention of CVD both in primary and secondary care remains a significant challenge. Large numbers of patients continue to be cared for by primary care teams, presenting with complex comorbidities which have been known to exacerbate health inequalities and account for variations in the care given. The delivery of the programme from October 2020 to March 2023 included the COVID19 pandemic and as with many facets of health provision, the lipid and FH programme was also intermittently disrupted. This disproportionately affected the identification, treatment and care of those most at risk of CVD across our Integrated Care Systems (ICS).

Scale of our challenge: Cardiovascular Disease (CVD) is a leading cause of death in the UK

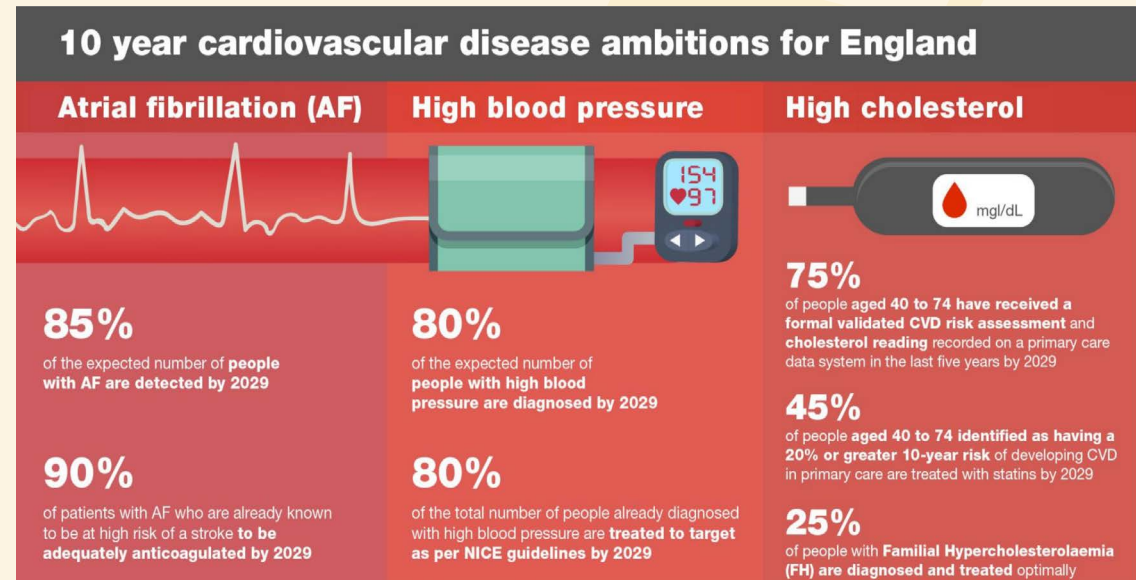
85%
of all CVD deaths are due to heart attack or strokes




ABC/NHS 10 year LTP Policy Ambition to Improve CVD Prevention

To achieve the NHS's 10 year CVD ambition within the programme, the AHSN Network and our partners were very clear that lipid optimisation has to be delivered holistically and therefore acknowledging the need to make every contact count (MECC) for every patient.

This meant within the programme an ABC approach was essential, and as such taking into consideration Atrial Fibrillation (AF), hypertension and lipid optimisation targets when treating patients. The national ambitions for these three CVD areas are all underpinned by the AHSN Network's desire to do more to reduce health disparities between our most and least deprived communities by 2029.



 Office for Health Improvement & Disparities

 NHS Benchmarking Network

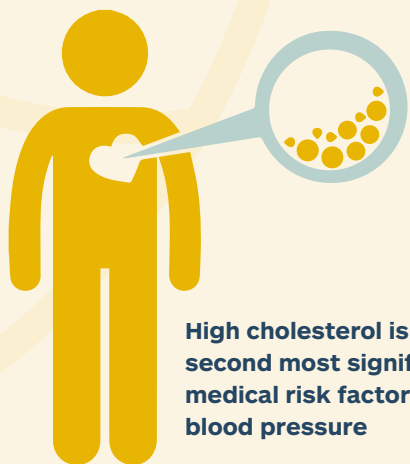


Forecasts suggest that the societal return on investment within the programme is estimated to be £2.30 for every £1 spent on CVD prevention, including the value placed on improved health.

Cholesterol and Lipid Lowering Therapies

Whilst the body needs cholesterol to build healthy cells, high levels of cholesterol can increase the risk of heart disease or stroke by causing fatty deposits to build up in the arteries.

High cholesterol can be reduced through healthy lifestyle choices and, where appropriate, by lipid lowering therapy. Lipid lowering therapy is used to reduce high levels of fats, such as cholesterol, in the blood. Two cholesterol indicators (CVDP001CHOL & CVDP002CHOL) were retired after the September 2021 data extract and were replaced by two new indicators (CVDP009CHOL & CVDP010CHOL) from March 2022. The new indicators mark a change to the definitions, from including a recording of a previous prescription of lipid lowering therapy (at any time) to a recording of current prescription of lipid lowering therapy (within the last 7 months).



High cholesterol is the second most significant medical risk factor after blood pressure

In the UK
25-28%
of CVD death is due to elevated cholesterol

People that are already diagnosed with CVD have a high risk of having future heart attacks or strokes. NICE guidance recommends that lipid lowering therapy treatment is prescribed for patients with CVD for secondary prevention, to lower the risk of repeat heart attacks or strokes.

In March 2022, 81.4% of patients with CVD had a current prescription for lipid lowering therapy.

This means that approximately 1 in 5 people, with CVD, are not receiving this treatment. This translates to just under half a million people in the audit sample.

Lipid lowering therapy can also be used for primary prevention to prevent an individual from developing CVD. CVDP008CHOL combines multiple factors that would make an individual eligible for primary prevention of CVD with a lipid lowering therapy.

In March 2022, 48.3% of patients in this group had a prescription for a lipid lowering therapy.



Implementing The National NICE Endorsed Lipid Pathway

The ‘golden thread’ running through the AAC/AHSN National Programme is the NICE endorsed Lipid management guidelines available via the NHS England website.

This document summarises over 14 pieces of different NICE guidance that relates to lipid management into one place making it easily accessible and implemental process for busy clinical teams. The national programme set out to increase awareness of these guidelines and encouraging use of this evidence based approach in clinical practise. The up to date version of the [national pathway collaborated by the AHSN, NICE and our partners can be accessed here.](#)

As part of the national programme, the AHSN Network developed two additional lipid management pathways to support healthcare professionals to implement NICE and other relevant evidence in secondary prevention lipid management. This included a pathway for acute cardiovascular disease in secondary care and a second pathway for primary care clinicians. The pathways provide clear and simple guidance for clinicians on how optimal lipid management may be achieved and provide an additional resource to support patient management. [Download the pathways from the AHSN Network website*](#).

These pathways were developed in line with NICE guidance and adapted by a Clinical Advisory Group, chaired by Professor Gary Ford (Chief Executive of Oxford AHSN and Consultant Stroke Physician), and coordinated by the Accelerated Access Collaborative (AAC). Membership included representation from the NHS England National Clinical Directors for Stroke, Heart Disease, and Primary Care, and the National Speciality Adviser for CVD Prevention, alongside primary care and secondary care clinical specialists in cardiovascular disease.

Before the start of the national programme, background work was done through extensive consultation with patients and key stakeholders including pharmaceutical providers who all collaborated to identified systemic barriers to optimal lipid management for identified and at high risk CVD patients. A summary of key barriers identified are shared opposite.

*The primary care pathway is supported by the [UCLPartners Proactive Care Frameworks](#) (including comprehensive search and stratification tools and resources to support clinical care, self-management and behaviour change).

What are the Barriers Leading to Sub-Optimal Lipid Management?



Lack of patient identification

Lack of incentives or initiatives to drive cholesterol measurement/management



Lack of follow-up

High risk patients not followed up after health checks



Inconsistent pathways

Variations in care pathways for elevated LDL-C across England



Limited awareness of new Tx

Some clinicians are unaware of newer treatments (e.g. PCSK9 inhibitors) especially in primary care



Poor adherence

Unfavourable public perception of statins & poor adherence



Restricted prescribing

Red drug. Prescribing restricted to secondary care. Limits the number of prescribers/ may create long wait times



Sporadic LDL-C measurement

An LDL-C measurement is required to initiate new novel therapies - not routinely measured or recorded in most cases



Treatment complexity

LLT optimisation involves multiple steps & repeated blood measurements before use of many of the new novel therapies

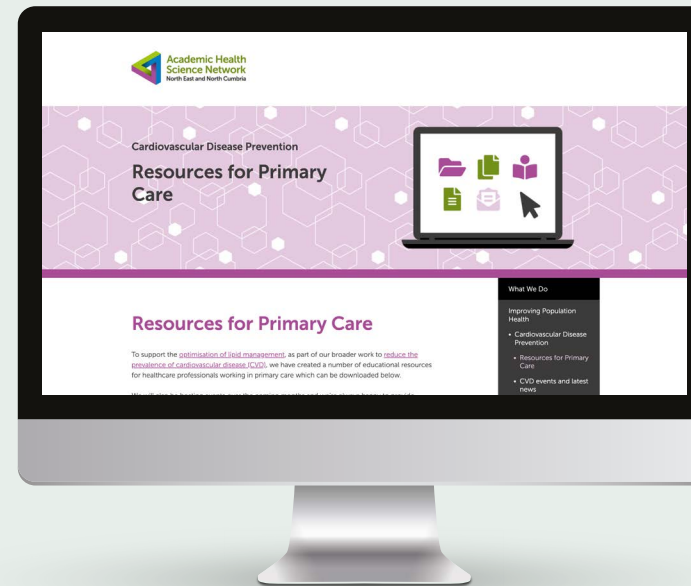
Patient Search Tools

In order to identify those who would benefit from optimised lipid management a range of search tools have been developed and represent one tangible output from our programme which represent a legacy of the programme.

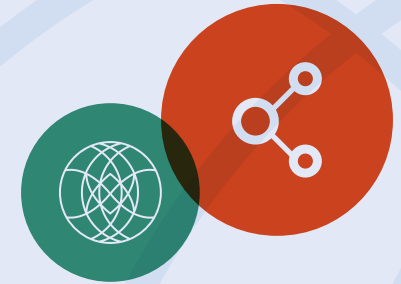
Collaborating with NHSE and the Accelerated Access Collaborative, the AHSN Network co-developed a lipid patient search tool resource which details the main patient search tools developed through our stakeholders. These patient search tool resources included the [Clinical Digital Resource Collaborative \(CDRC\)](#), the [Health Innovation Manchester search tool](#), an [Ardens resource tool kit](#), the [NHS Digital search tool](#) and the [UCLP resource](#).

These patient search tools provide clinicians with support when identifying at risk patients who need to be treated based on the national lipid and FH pathway. All the tools reflect the challenge set out by the CVD Prevent audit tool, which is publicly available and has aggregated data benchmarked against national values aiming to reduce CVD steeped health inequalities.

These resources developed in response to the national programme are hosted on the [Academic Health Science Network for the North East and North Cumbria \(AHSN NENC\) landing page of resources](#) and the central [AHSN Network website](#).



Communications and Engagement Programme Wide Strategy



During the delivery of the national lipids programme a communications and marketing plan for the Lipid Management and Familial Hypercholesterolaemia (FH) programme was developed by the AHSN NENC communications team.

The aims were to:

- Raise awareness of how AHSNs contribute to wider CVD prevention Long Term Plan priorities, and the support offer to primary care and secondary care teams across England
- Amplify the key messages of the programmes' workstreams to healthcare professionals across primary and secondary care organisations
- Share and encourage the use the many free resources that have been produced as part of the programme. These included resources for patients and educational materials for healthcare professionals.

Examples of resources developed as a direct result of, and shared to support the promotion of the national Lipids and FH programme include:

FH detection and lipid management optimisation

- [Series of FH films and short clips](#)
- [What is FH? Animation](#) which has been recognised for best practice in NENC and reproduced for other regions (7.6k views for AHSN NENC animation)
- [Suite of cholesterol animations](#) and leaflets produced for patients in collaboration with Heart UK and [two animations](#) - (4k views)

Access to appropriate medicines, including novel therapies

- Podcasts and talking heads with experts including Professor Ahmet Fuat and Dr Phil Jennings [Lipid management and Familial Hypercholesterolemia - The AHSN Network](#)

Education to healthcare professionals

- [7 minute talking head education video](#) about lipid optimisation, with a focus on QOF 23/24 (1.2k views)

Further resources created by the AHSN NENC team can be found at www.ahsn-nenc.org.uk/resources-for-primary-care

I PPI/E and EHIA Workstream



Working with people who use NHS services within the national programme was key to remind us of what we have been commissioned to deliver and for whom. Together with our expert patients, we co-produced the delivery model for the programme and how best it was being rolled out, as well as how new innovations and improvements were implemented to achieve better outcomes for our patients. Involving patients, carers and communities – particularly the marginalised or underserved groups – in our national programme was not only the right thing to do, it helped build trust, demonstrated good governance, and helped to create a programme that was safe, effective, patient-centred, timely, efficient and equal.

A programme wide Equality and Health Inequalities Impact Assessment (EHIA) was also co-produced with expert patient representatives and endorsed by NHSEI. Our EHIA aimed to assess the impact of our programme on our target CVD population to ensure that no groups would be discriminated against, that the programme also widen access whilst promoting the interests of any people with protected characteristics.



I Context

The relevant policy and legal context for involving patients and the public in our work are described in:

- NHS England & DHSC, Statutory Guidance 2022: [Working in Partnership with People and Communities](#)
- [AAC patient and public involvement strategy 2021-26](#)
- National Quality Board report, 2022 [Improving experience of care: A shared commitment for those working in health and care systems](#)
- [ABPI Code of Practice, 2021](#)
- [NIHR, 2021, Best Research for Best Health: The Next Chapter](#)

All policy and guidance describe the importance of involving people with lived experience, their families and the public in deciding on, designing, delivering and evaluating programmes of work, and also being involved in their governance. These activities together form an approach, often referred to as coproduction, where patient and public involvement occurs early and throughout programmes, alongside recognition of the inherent power imbalances.

The relevant CVD policy is within the [NHS Long Term Plan](#) and the Core20+5 approach to health inequalities. From July, this refers to lipid optimisation under [Hypertension Case Finding](#).

The Approach Taken

The approach described was supported by the AHSN Network Lipids Health Inequalities and Community Involvement Group. In the final year of operation this Group covered the blood pressure optimisation programme as well as lipid management. This Group was composed of the National AHSN Network lipid and BP Programme Leads, involvement leads from two AHSNs and the three patient partners that supported the Lipids Programme.

There were four components to the approach taken to community involvement and health inequalities.

- 1: Understand what is already known: don't duplicate, know what people are doing already
- 2: Involve patient and the public early and throughout
- 3: Understand populations and communities
- 4: Plan, take action and support colleagues.

1: Understand what is already known

Evidence search and summary
We conducted a literature search and produced an evidence summary covering:

- Incidence, prevalence, access, outcomes, experience and shared decision making for dyslipidaemia and familial hypercholesterolaemia,
- focusing on those groups in the population that might experience inequalities/inequity.

This was reviewed, and then updated, by clinicians and patient partners involved in the programme. Completed for Lipids in Spring 2021 and for Hypertension in Spring 2022.

Equality and Health Inequality Impact Assessment (EHIA)¹ - Information from the evidence summary was used to populate an initial EHIA that was signed off by NHE England Equalities Unit. This formed the basis to help decide where targeted action might be taken. This was circulated to local AHSNs to support their local EHIA development and planning. Lipids completed & signed off by Equalities Unit, March 2021, updated January 2022 to include injection as a mode of administration.

2: Involve early and throughout

Governance: Co-decide

The original lipid working groups planned to have two patient/public members: a patient, or carer, and a charity representative, alongside an involvement methodologist. Three lived-experience members were appointed through open advert for the Lipid Programme's working groups. They meet regularly with staff members to help coordinate their input to the programme's work. Heart UK and British Heart Foundation representatives also joined working groups, as did the Lipid Programme PPI Lead.

Patient and public involvement and health inequalities were regular agenda items on working groups.



¹Equality and Health Inequalities Impact Assessment (EHIA) is the careful examination of a proposed innovation, policy, strategy, service or function to assess the impact it may have on individuals and groups with protected characteristics or who experience health inequalities. This assessment summarises whether the proposed intervention is likely to contribute to advancing equity of opportunity and/or reduce health inequalities. Both positive impact and possible adverse effects should be assessed.

Co-define

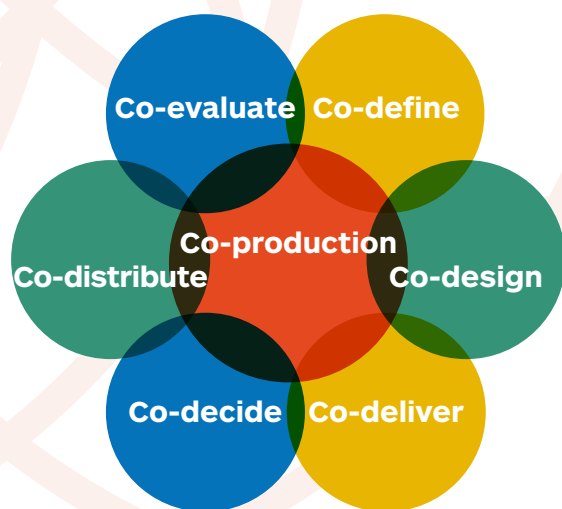
Patients and the public were involved, alongside clinicians, in the workshops to define what patient-facing materials might be needed for the lipid programme, resulting in a series of animations being produced.

Co-design

Our lived-experience partners were involved in many aspects of the programme's design, for example, commenting on survey design, content and design of patient education materials.

Co-deliver

Similarly, lived experience members were involved in the delivery of the patient information workshops and in the Angels in the Attic drop-in sessions (see below).



3: Understand populations and communities

Dashboard development

National work to show where across the country relevant inequality and inequity exist to give local AHSNs the broadest picture in relation to CVD inequalities.

Patient information

Patient and clinician workshops (one on dyslipidaemia and one on familial hypercholesterolemia) were run to help inform what resources might be needed. The output of the workshops underwent thematic analysis. This, alongside review of existing resources for patients, led to development of a co-produced series of animations and leaflets to raise awareness of the problems of high cholesterol and to myth bust. The storyboards and drafts were iteratively developed by lived experience partners and clinicians involved in the programme (workshop reports attached). The workshops and analysis were completed in May '21, and suite of animations, leaflets, and social media clips in Summer '22. This work also identified that there was a gap in the resources available for shared decision making. An initial review of available resources was undertaken, and funding options explored.

Seldom heard communities

Focused events with Polish, South Asian, and communities living in areas with high IMD scores, exploring 'How do you feel about your health? How do you feel about heart disease?' were run.

4: Plan, and take action

The national work undertaken – evidence search and summary, EHIA and dashboard development - was shared to support both national and local implementation plans, including relevant patient and community involvement and action.

Specific actions to support AHSN CVD leads included:

- Survey of AHSNs asking about existing and planned community involvement and health inequalities work, also asking about any support they might need: Autumn '21 with follow-up May '22. The results of the survey led to Angels in the Attic sessions and the webinar series.
- Angels in the Attic sessions: five, virtual drop-in sessions were run for AHSN local CVD leads. These sessions encouraged CVD leads to come and talk with a range of experts (national Lipid and BPO Programme Leads, lived experience partners, other staff with community involvement and health inequalities knowledge). The approach being 'all questions are valid). Sessions held over Summer '22.
- Webinar series: four lunch and learn session were run covering involvement and health inequalities topics identified in the surveys and Angels' sessions: Autumn'22.

Tackling Cholesterol Together: National AHSN/Heart UK Educational Programme

HEART UK has partnered with the NHS Accelerated Access Collaborative (AAC) and the Academic Health Science Network (AHSN) to provide a **comprehensive and varied education programme for healthcare professionals.**


Tackling Cholesterol Together is the national professional education programme supporting the NHS England and NHS Improvement (NHSEI) 3 year lipids workstream, which just completed its second year.


Elements of our education programme are funded by 'hands off' sponsorship from pharmaceutical companies.



5,786 
healthcare professional viewed our educational webinars

92% 
of healthcare professionals reported being 'more' or 'much' confident on these topics

92% 
said the programme will help them improve their patient care

93% 
said they would recommend our programme to their colleagues

Feedback from HCPs completing our e-learning modules...

"Please continue with the excellent education. We're looking to start a Lipid clinic in my GP group."

"Excellent e-learning, consolidates everything I've learned in other modules. Great resource, clearly presented."

"Very well presented e-learning, website excellent for patients."

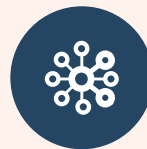
"Brilliant e-learning module, very enlightening. Pathway gives clear guidance on the use of statins."

"Thank you for providing an excellent educational resource. I feel more confident to bridge theory and practice after this module."

Performance Dashboard & Programme Wide Impact: Patient Uptake of KPIs

The National Lipid Programme was delivered in the environment of the COVID-19 pandemic. Cardiovascular disease (CVD) and its risk factors are common comorbidities in patients with COVID-19 and associated with poorer COVID-19 outcomes and high mortality. COVID-19 restrictions have led to a significant, unintended reduction in detection and treatment reviews of CVD risk factors. As a consequence, it has been suggested that the COVID-19 pandemic has also led to a worsening of the long-recognised health inequalities associated with CVD.

Data confirms that treating 10 patients who have had a previous cardiovascular event with a statin or moving 45 people from a low/medium statin to a high intensity statin will prevent 1 CVD event in 5 years. In order to understand the temporal changes over a three-year period in the prescribing of HIST and non-HIST therapy and ezetimibe in England to understand the impact that the COVID-19 pandemic and associated lockdowns had on prescribing and the associated risk of future CVD events we collaborated with colleagues from NHS Business Services Authority (BSA) to explore prescribing of lipid lowering therapies in England. Its important to consider the impact of the National Lipid and FH Programme which has been achieved despite the major impact that the pandemic has clearly had upon prescribing of lipid lowering therapies. This was published in an [academic journal](#).



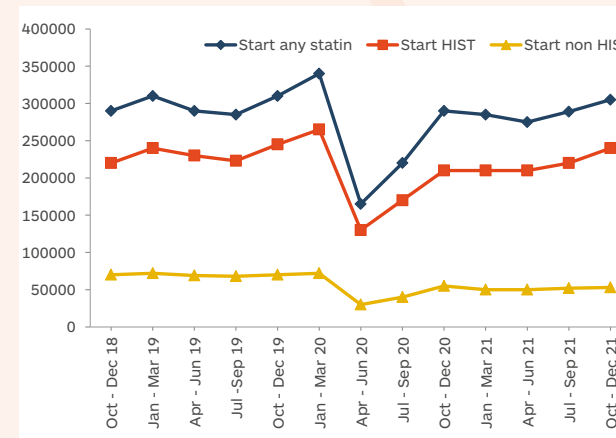
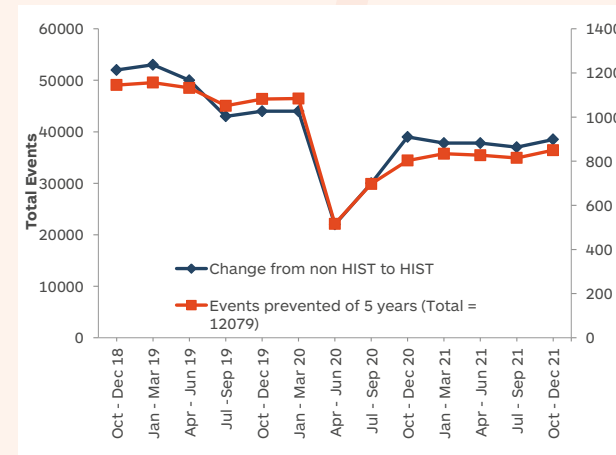
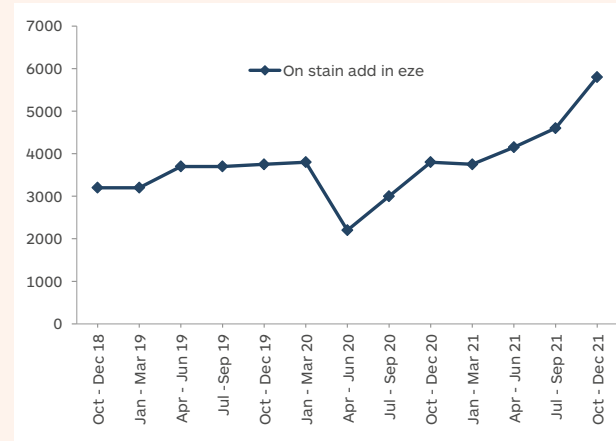
Impact of the pandemic

If we consider just the switching of individuals from non-HIST to HIST in the cohort considered in this review and the associated benefits of doing this.

If the number of events prevented had been sustained at pre-pandemic levels of 1084, then an **additional 2156 CVD events would have been prevented within 5 years.**

Considering estimated direct medical costs of acute coronary syndrome in Europe of £13250-£15,969, this would suggest a **missed saving of at least £2,856,700 and up to £34,429,164** if those individuals who were taking non-HIST had been converted to the therapy with the greatest recognised risk reductions i.e. HIST .

This is likely to be a **considerable underestimate** of the actual saving opportunity that has been missed, as it is also recognised that the real cost of a heart attack is twice the direct medical expenses in terms of lost working for patients and care givers.



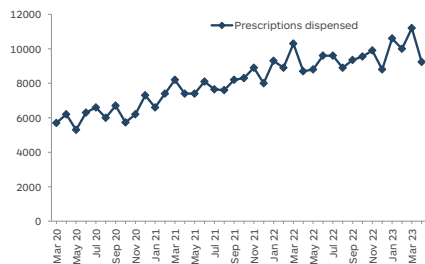
PCSK9i

The number of PCSK9i devices dispensed over the course of the programme administered as a single dose once every four weeks (with a single dose equating to a patient) was one of the programme's metrics. Since the start of the programme there has been a steady increase in the number of PCSK9i devices dispensed throughout the wider health care system, with this intervention becoming a key option within the NICE endorsed lipid and FH pathway. The graphs below confirm that by March 2023 at the end of the programme, activity delivered outstripped the set cumulative trajectory of 10,439 devices to be dispensed.

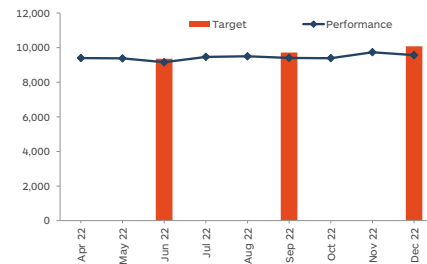
Impact Since October 2020

- October 2020 there were **5,729** prescriptions dispensed
- By March 2023, at the end of programme there were **9,234** which is an **increase of 3,505 (70%) prescriptions** since Oct 2020

PCSK9i Delivery Activity



PCSK9i Performance against Targets



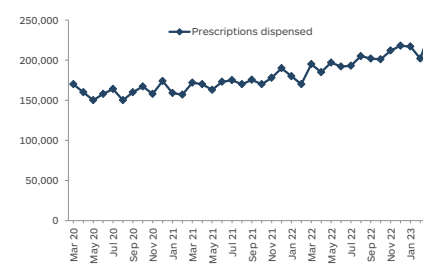
Ezetimibe

Ezetimibe was another key intervention of choice within the NICE pathway. For the volumes articulated in the graphs below, each prescription item dispensed represented a patient. Uptake of the drug against set targets paint a picture of continual upwards growth in prescriptions dispensed, since the start of the programme culminating in 2,475,530 items overall, dispensed by March 2023.

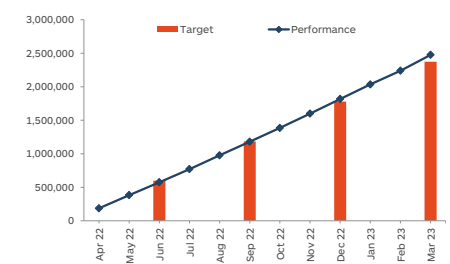
Impact Since October 2020

- For secondary prevention of incidence after adding Ezetimibe: **910** is the number needed to treat 1 CVD event
- By March 2023, at the end of programme **236,383** Ezetimibe items were dispensed, which is an **increase of 169,196 (70%) prescriptions** since Oct 2020 = **186 CVD additional events prevented**

Ezetimibe Delivery Activity



Ezetimibe Performance against Targets



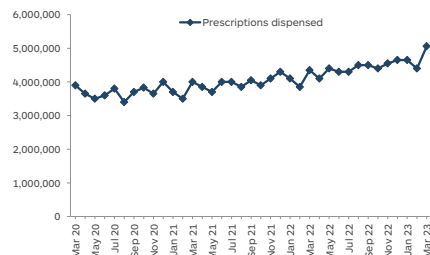
High Intensity Statins

High-intensity statins, according to NICE guidance, reduce atherosclerotic cardiovascular disease (ASCVD) risk by a third more than moderate-intensity statins, and thus should be the first line therapy for patients considered to be at high risk of CVD. The decision to start statin treatment for our patients, was made after informed discussions with patients about the risks and benefits of treatment. This took into account factors such as co-morbidities, potential benefits from lifestyle intervention, and the patient's preference -- shared decision making. The aim of HIST treatment is to achieve a greater personalised reduction in non-HDL-C levels for each patient.

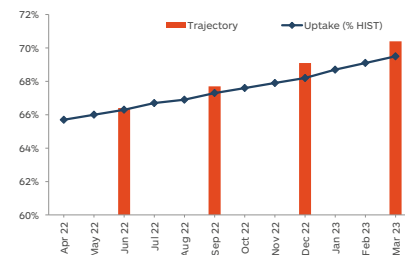
Impact since October 2020

- For secondary prevention of incidence: **2,336** is the number needed to treat 1 CVD event
- For primary prevention of incidence: **5,372** is the number needed to treat 1 CVD event
- By March 2023, at the end of programme **5,059,373** HIST items were dispensed, which is an increase of **1,229,964 (75%)** prescriptions since Oct 2020 - which **estimates to be between 229 and 527 additional events avoided**

HIST Delivery Activity



HIST Performance against Targets



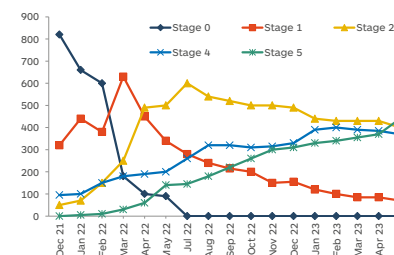
Novel Therapies: Inclisiran

In September of 2021, inclisiran was approved by NICE as an additional therapy in the lipid management pathway. The AHSN Network were commissioned by NHSE to support the implementation of inclisiran using a population management approach initially focussed upon primary care. The programme has involved significant degrees of engagement with stakeholders across the AHSN Network with increased awareness of the additional opportunity that inclisiran provides for clinicians when targeting lipid optimisation.

Impact of the Inclisiran Workstream (to end June 2023)

- Primary care is the **preferred setting for systematic case finding**, risk prioritisation and prescribing Inclisiran, with support from secondary care
- 97% formularies** recommend prescribing in primary care
- 891 unique PCNs** are engaged to prescribe Inclisiran since launch (70%)
- Up to end March '23, there were **4,875 doses given** in primary care¹
- Two new **AHSN secondary prevention pathways** published, one for use following an acute cardiovascular event, one for use in primary care²
- The updated Summary of National Guidance is implemented and **Inclisiran is in active use in 15/15** AHSN geographies

PCN engagement progress since December 2021



Stage 0: Engagement not yet started
Stage 1: initial engagement (e.g. webinar or other engagement / briefing event)
Stage 2: Enhanced engagement moving to detailed information sharing, growing relationship and signalling of intention to implement.
Stage 3: Organisation indicates they will not adopt/ implement, reason recorded.
Stage 4: Moving toward implementation (rollout of toolkits/ educational materials, pathway adoption, development of lipid management strategy)
Stage 5: Patient pathway implemented and inclisiran in active use

Familial Hypercholesterolaemia (FH)

Familial hypercholesterolaemia affects 1 in 250 of the population. It is associated with a significant increased risk of cardiovascular disease, which is reduced if the elevated cholesterol is treated. Despite this, the majority (90%) of those in England with the gene for FH are unaware that they have it, and as a consequence are at increased risk of CVD. The AHSN Network national programme set out to develop a systematic approach to identifying those with FH with a view to support the NHS Long Term Plan (NHS LTP) ambition to detect 25% of those with FH by 2025. Our ability to achieve this target was dependent upon being able to measure FH cases. At the start of the programme it was recognised that unless a robust, appropriately governed system was in place nationally it would be challenging to achieve the NHS LTP target. The AHSN Network team worked closely with [HEART UK](#) and was represented at the National Expert Advisory Group (subsequently known as the FH National Delivery Group) to improve coding for FH in primary care, increase the use of validated search tools, to define appropriate and robust measurement of cases via CVD PREVENT. The AHSN Network team also worked collaboratively with the NHSE Genomic Medicine Service Alliances to [deliver education and training to support new clinical services](#) and to pilot innovative models for delivery focussed upon harnessing the skills of clinical pharmacists.

In 21/22, the programme team was involved in discussions and the subsequent deployment of a new QOF target which increased detection rates for FH in primary care, raised awareness and led to the development of many new pathways within localities.

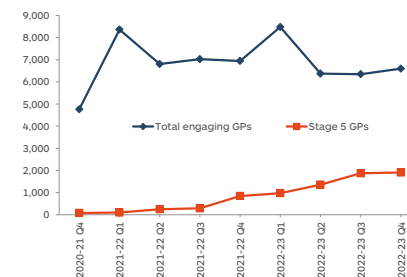
Adoption of the Lipid and FH Pathway

With the national lipid and FH NICE endorsed pathway being our programme’s “golden thread”, its wider adoption by both primary and secondary care stakeholders was always a good measure of how systematic lipid optimisation was being applied nationally. Stages of adopting this pathway were ranked from **Stage 0**, where our GPs had no information of the pathway and how to use it, **Stage 1** where GP practices were aware of the pathway. **Stage 2** was when practices genuinely engaged with interest to learn about the pathway. **Stage 3** was a stage when practices acknowledged the pathway but did not engage or apply it. **Stage 4** was when practices actually engaged and then implemented it. **Stage 5**, was the ideal stage where practices implemented the whole lipid pathway with patients clearly benefiting from lipid optimisation through the use of various treatment options within the full pathway. Below is activity based on the number of practices who by the end of March 2023 were fully adopting the pathway at Stage 5.

Impact since October 2020

- **Stages of Adoption** relate to wider participation in the programme, not just absolute prescribing rates
- **Stages of Adoption** also relate to the effort of and work of respective regional AHSNs and their provider stakeholders
- Stage 5 represents implementation of the national guidance and related strategies supporting increased uptake of lipid optimisation initiatives related to better patient outcomes **(Q4 of 2022/23 suggests about 30% of practices at Stage 5).**

GP Stages of Adoption of the NICE endorsed lipid guidelines



AHSN Facilitated Funded Projects

The National programme and its associated activity has acted as a platform for a range of other opportunities that the AHSN Network has been able to deliver as a result of the work being delivered on the ground by individual AHSN's. These initiatives are broad and not exhaustively highlighted below:

For example: The AAC, NHS England's National Innovation for Healthcare Inequalities Programme (InHIP) in partnership with the Academic Health Science Network (AHSN), delivered in partnership with integrated care systems (ICSSs). InHIP leads from each of the 15 AHSNs nationally, worked with their local systems to understand their local healthcare inequalities priorities.

CVD is one of the disease conditions that contributes most to widening of health inequalities. The condition accounts for one-fifth of the life expectancy gap between most and least deprived communities, especially for people from South Asian and Black groups who do have the highest risk of CVD. It was therefore not surprising that the majority of funded projects nationally focused on tackling CVD, with 29 of the 39 InHIP projects CVD centric.

'23 '24 Lipid Focussed Funded Initiatives

Project distribution by AHSN region				
AHSN	Workforce	STF	CLF	InHIP
Eastern	✓	✓	✓	
E Mids	✓		✓	
HInM	✓	✓	✓	
HIN	✓	✓	✓	✓
ICHP	✓		✓	
IA	✓	✓		✓
KSS	✓		✓	✓
NENC	✓	✓	✓	✓
Oxford	✓	✓	✓	✓
S West	✓		✓	✓
UCLP	✓	✓		✓
Wessex	✓			
WM	✓	✓	✓	
WoE			✓	✓
YHAHSN	✓	✓	✓	✓

Workforce Support: On the ground pharmacy support in GP practices



- Secondary prevention
- **85k** planned patient optimisations
- **11,065** patient invites reviewed
- **750** days booked of third party pharmacist support

System Transformation Fund (STF): Increasing access to secondary prevention in ICB C20+5



- Broad ASCVD approach with a lipids focus - impact will be access to treatment across whole ASCVD register including BP and AF, primary and secondary prevention

Collaborative Lipids Fund (CLF): Collaboration across primary and secondary care and ICBs



- Secondary prevention focus
- Outcome measures inc. CVD prevent CHOL indicators to establish percentage Treatment To Target and CDV treated with lipid lowering therapy

Inequalities in Healthcare Innovation Programme (InHIP): Accelerated access to innovations and pathways for people experiencing healthcare inequalities across the five clinical focus areas outlined in the C20+5

- **15/29** projects (across 39 ICBs) with lipids focus
- **15/15** focus on the 20% most deprived population
- **3/15** with broader ASCVD focus (AF,BP, HP)

■ Pathway Transformation Funding

Improving outcomes for patients with cardiovascular disease (CVD) was a clinical priority in the NHS Long Term Plan. To support delivery of this part of the NHS Long-Term Plan, the Accelerated Access Collaborative (AAC) Lipid Management Rapid Uptake Product (RUP) Working Group collaborated with the AHSN Network from July 2020 to make available funding to increase the uptake of PCSK9i. Here is a synopsis of some of the impact and activity delivered through the first wave of PTF funding from **13 funded sites nationally**.

Programme Legacy: RUP Pathway Transformation Funding Wave 1 & 2

- **13 funded sites**
- Providers to deploy innovative ideas and solutions aimed at overcoming barriers to the deployment and adoption of Rapid Uptake Products
- Demonstrate collaborative and 'at-scale' working across the health system to implement a regionwide use of the national pathway

Read more about this programme within our two reports: [Wave 1&2 - Pathway Transformation Fund Summary Report](#) [Wave 3 - Pathway Transformation Fund](#)

Over **819**  patients were identified for lipid optimisation

Pilot sites searched over **240,581** eligible patients through case finding tools and manual searches

Over **896**  patients accessed Ezetimibe

Just over **218**  patients had their Annual Medical Reviews

674  patients had their statins increased

123  patients were wrongly coded

Over **2,939**  patients were not eligible for PCSK9i

There were over **3022**  REDCap entries for lipid optimisation from **11** sites

■ Pathway Transformation Funding

A further **8** sites were subsequently funded through the Accelerated Access Collaborative (AAC) Rapid Uptake Product working group to improve the prescribing and use of PCSK9i as a lipid optimisation option intervention.

Programme Legacy: RUP Pathway Transformation Funding Wave 3

- **8** funded sites
- Providers to deploy innovative ideas and solutions aimed at overcoming barriers to the deployment and adoption of Rapid Uptake Products
- Demonstrate collaborative and 'at-scale' working across the health system to implement a nationwide use of the national pathway

Read more about this programme within our two reports: [Wave 1&2 - Pathway Transformation Fund Summary Report](#) [Wave 3 - Pathway Transformation Fund](#)

12
patient case studies collated



185
patients initiated on Ezetimibe



>2578
patient searches done



4
adversely reacted to PCSK9i



889
with possible FH

23
initiated on Bempedoic Acid



3239
patients referred to lipid clinics



260
patients declined further lipid optimisation interventions



101
referred onward for other CVD therapies



>40,169
patients not eligible for PCSK9i

798
patients switched to HIST



426
patients new on the CVD register



89
Reacted to statins



>6620
patients seen face to face



188
reviewed for possible FH

>861
patients started on statins



71
patients new to PCSK9i



20
eligible for Inclisiran



>128
patients took up lifestyle referrals



137
initiated on other drug combination therapies

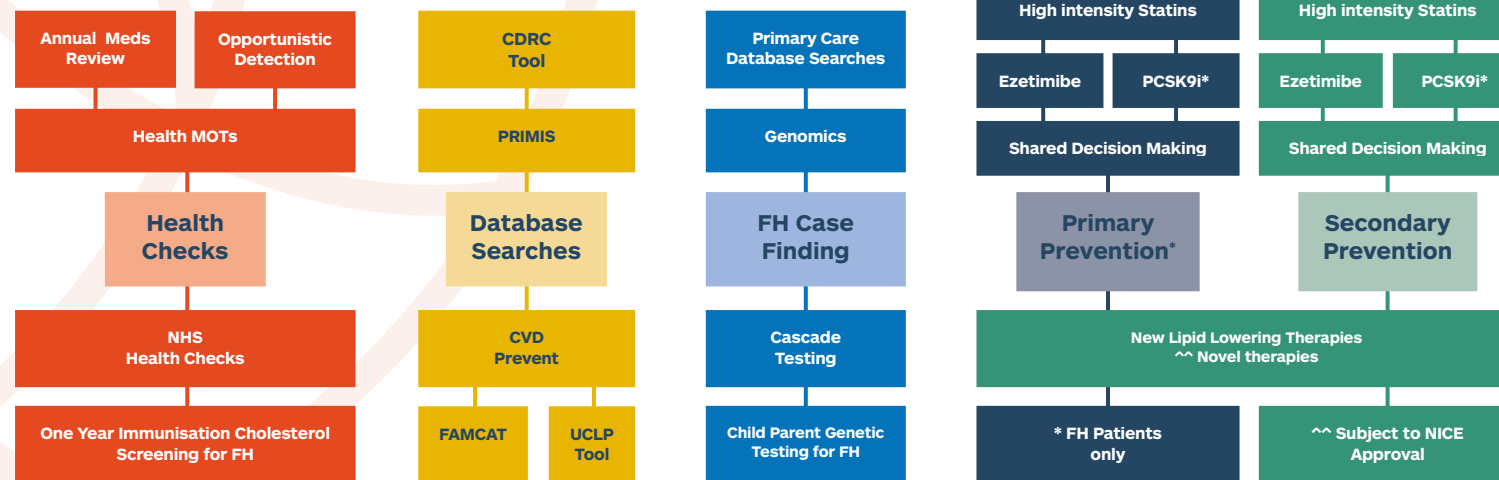
National Delivery Model and AHSN Regional Case Studies



AHSNs nationally adopted the national NICE lipid and FH pathway regionally to ensure their delivery would be systematic and evidence based. The national model articulated regional sets the key components delivered by AHSNs through various case studies celebrated in this section.

The AHSN Network set out consistently to systematically or opportunistically case find patients at high risk of CVD through health checks. Databases within primary and secondary care also enabled the identification of patients through various patient search tools. FH was also prioritised through FH case finding to then enable cascade testing and Child Parent Screening. Options for patients who required primary or secondary prevention were available through the use of lipid Lowering Therapies from High Intensity Statins to novel therapies including Ezetimibe, PCSK9i and Inclisiran.

The AAC/AHSN Lipids & Familial Hypercholesterolaemia National Programme Delivery Model



The following case studies from our AHSNs and their respective stakeholders articulate some of the great work that has been delivered since the inception of the national programme from October 2020, with NENC AHSN providing the national strategic leadership of the programme's delivery.

Accelerating the Re-design of the Somerset Lipid Service

The South West AHSN have played an integral part in bringing together a multi-organisational team to plan and implement the Somerset lipid service re-design aimed at improving patient cardiovascular disease (CVD) outcomes.

Approximately 7.6 million people are living with CVD in the UK and there are 460 deaths from CVD every day, which equates to 1 every 3 minutes. Abnormal cholesterol levels are one of the nine most common risk factors that contribute to cardiovascular risk. They are responsible for up to 28% of CVD deaths. Lowering LDL (low-density lipoprotein) Cholesterol significantly reduces the risk of cardiovascular death* and a 1mmol reduction in LDL Cholesterol levels reduces major vascular events by 23%, making lipid-lowering interventions an essential preventative approach.



“You’ve facilitated and sped up the whole process. It’s like pressing fast forward on an NHS development which, in my experience, would usually take several years.”
Dr Alex Bickerton,
Yeovil Hospital

Challenge/problem identified

In 2020/21 the Somerset health care system had huge challenges with only one lipid clinic session for 11 patients a month. This resulted in an 80-118 week waiting list, with only 0.7% of those with Familial Hypercholesterolaemia (FH) genetically diagnosed, and a lack of confidence amongst primary care teams to manage those with raised cholesterol.

Overview of Innovation

In late 2021, the South West AHSN brought together the South West Genomic Medicine Service Alliance (SWGMSA), Somerset CCG (ICS), The Somerset Training Hub, Yeovil District Hospital (YDH) and Public Health Somerset to create a multi-organisational team to work together to:

- Secure funding for the lipid service design and delivery
- Build and solidify the foundations for a sustainable service including defining and recruiting into key roles
- Deliver primary care education in lipid management to improve detection and treatment of hyperlipidaemia including the development of key resources for Health Care Professionals (HCPs) and people with or at risk of CVD
- Help develop a primary/secondary care integrated and regional lipid pathway, by working alongside the lead clinician and primary care and the commissioners
- Develop pharmacist and GP led lipid clinics, with oversight from the lead clinician
- Outcome/Impact
- The collective efforts so far have contributed to:
 - An increase in patients seen by a practitioner from 11 per month, to 66 per month**
 - An increase in clinic provision from one session per month to one per week
 - A reduction in waiting times from 80-118 weeks to 36 weeks

Sources:

*[Baiget et al. Lancet. 2012](#)

**Somerset Lipid Clinic Consultant 24.03.23



■ Familial Hypercholesterolaemia (FH) Identification Projects

The Eclipse Live Familial Hypercholesterolaemia (FH) Identification Hub is a trailblazing approach to identify high risk FH individuals virtually on behalf of primary care. So far, this has been developed using a novel population health management method in Norfolk & Waveney ICS. Additionally, the region has developed a new genetic testing pathway for FH opened up to primary and community care.

FH is an inherited condition which can cause extremely high cholesterol levels, is passed down through families in the genes and can cause coronary heart disease (heart attacks) at very early age if untreated. The good news is that FH is very treatable and therefore case finding is key, although detection rates are significantly low. Therefore, the Eclipse Live FH Hub has set out to systematically identify and manage patients faster and more efficiently by providing an innovative and equitable solution to population health.

The project has been a collaboration between the East Genomic Medicine Service Alliance (GMSA); East Genomics; Eastern Academic Health Science Network (AHSN); Norfolk and Norwich University Hospitals Foundation Trust (NNUHFT); Norfolk & Waveney Integrated Care Board (ICB); Eclipse Live, Prescribing Services Limited and PRIMIS, University of Nottingham.

"I have gained a better understanding of the lipid profile and the implications for patients; this will improve my management of patients with hypercholesterolaemia and/or FH and give me the confidence to have an informed discussion with patients to promote shared decision making." Practice Nurse, Kingswinford

Challenge/problem identified

In the UK, CVD affects around seven million people and is responsible for one in four deaths; that's more than 160,000 deaths each year and includes more than 40,000 people under the age of 75.

As part of this, FH needs to be addressed because without treatment, FH can lead to heart disease at a very young age and people with undetected FH are four times as likely to have a heart attack or stroke than the general population. Unlike most genetic disorders, FH is entirely treatable, especially following the widespread availability of potent lipid-lowering medicine. Therefore, detection is key and early and sustained therapy to lower LDL cholesterol can normalise this risk and prevent premature CVD.

Overview of Innovation

The collaborative approach enabled multidisciplinary involvement from a wide variety of specialist stakeholders. This helped shape the most efficient and effective genetic testing pathway for FH, opening up the possibility for primary and community care to refer directly rather than traditionally through lipid clinics that can significantly delay diagnosis and management. Alongside this, the implementation of the FH Hub has resulted in primary care being part of a proactive solution that is delivered virtually by a CNS in FH, hosted in the Norfolk and Norwich hospital lipid clinic. The hub systematically searches primary care records remotely using complex algorithms, some of which are based on published research including FAMCAT. This is followed by engagement with patients to invite the very high-risk cohort initially to complete a CVD questionnaire to ascertain any further information that may be required e.g. family history. The very high risk cohort are requested to select an appointment slot for a telephone assessment conducted by the CNS FH. During this assessment, the patients receive genetic counselling for FH and have a genetic test for FH arranged, with a view to optimise cholesterol according to NICE guidelines for lipid and FH management. With consent, cascade testing for family members can be arranged. There will be subsequent engagement as above with the high, medium and low risk of FH cohorts.

Outcome/Impact

It is estimated that across Norfolk and Waveney ICS, of the 4,323 patients estimated to have FH (equivalent to 1 in 250 of the population), 4,020 cases (93%) remain undetected and potentially untreated. Phase one of the project has involved deploying the FH Hub in four PCNs (21 GP practices). The FH Hub has identified 88 very high-risk patients; 163 high-risk and 404 medium-risk patients. The CNS FH has engaged with these patients, starting with the very high-risk category to conduct assessments and arrange genetic testing for FH. The East genomics laboratory hub has prioritised screening 12 patients per week. Therefore, the CNS FH via the FH Hub may see up to a maximum of 624 per annum.

It is anticipated that greater numbers of patients with FH will be identified and treated, leading to reductions in the number of premature deaths associated with FH. By targeting those at very highest risk of FH initially, and therefore limiting referrals for genetic testing to those who need it the most, this will potentially result in saving time and money for the NHS and reduce the burden on an over-stretched system.

In terms of the projection for future impact, it is estimated that from all 17 PCNs (105 GP practices), the FH Hub will identify 440 very high-risk patients; 815 high-risk and 2020 medium-risk individuals. The intervention therefore has the potential to benefit even greater numbers of patients and further reduce costs to the NHS.

Improving Education and Management of Cardiovascular Disease (CVD) Through a Primary Care Fellowship Programme

A series of CVD clinical webinars for healthcare professionals in south London was delivered over 7 months in 2022.

Topics included: lipid management, familial hypercholesterolaemia, hypertension, atrial fibrillation, and the psychology of behaviour change in CVD. Alongside this was training to enhance quality improvement (QI) skills for clinicians to complete a CVD project within their practice.

There were 19 educational sessions delivered over 17 hours of webinars. 85 HCPs completed the Fellowship. Fellows submitted a final report on 40 different QI projects impacting 58 GP surgeries:

- 19 projects in hypertension, impacting 21 GP surgeries.
- 14 projects in lipids, impacting 22 GP surgeries.
- 3 projects in familial hypercholesterolaemia, impacting 7 GP surgeries.
- 4 projects in atrial fibrillation, impacting 8 GP surgeries.
- Overall, primary care practitioners considered the Fellowship program as highly relevant and beneficial to patient care.

Challenge/problem identified

Primary care clinicians can play a key role in CVD prevention. The HIN learned via consulting with local stakeholders that additional training and education was needed to upskill south London primary care clinicians in this area.

Overview of Innovation

The HIN CVD Prevention Fellowship was different from other education programmes for primary care:

- A project delivery element was included (ie to complete the programme the Fellows had to deliver a Quality Improvement project).
- Continuing Professional Development-accredited webinars were delivered by local secondary care clinicians who were also able to discuss local pathways and case studies relevant to the local population.
- The Fellows' time was not backfilled; they had to participate in the programme on their own time.

The programme was carefully designed to focus on participants' needs and put minimum pressure on an already stretched primary care workforce. Feedback was collected regularly (eg live polls at the end of each webinar), with arrangements made to adapt the programme accordingly where necessary.

Actions taken/progress to date

Cohort 1 of the Fellowship has concluded, and the results are described below. More information can be found on the [HIN website here](#). **Cohort 2** commenced in July 2023.

"Fantastic content. Very relevant to my role and to primary care. Good structure also. Great speakers." PCN Clinical Pharmacist, East Twickenham PCN

Outcome/Impact and Benefit

The HIN CVD Prevention Fellowship was a 7-month programme delivering 19 clinical education and quality improvement training sessions. A total of 104 HCPs signed up to the Fellowship and 85 (81.7%) completed it. Collectively, 40 CVD quality improvement projects impacted 58 GP surgeries across all 12 boroughs of south London. Some projects are ongoing, and they have led to long-term changes in the way CVD conditions are managed in primary care. The Fellows completed:

- 19 projects in hypertension, impacting 21 GP surgeries.
- 14 projects in general lipids management, impacting 22 GP surgeries.
- 3 projects in familial hypercholesterolaemia, impacting 7 GP surgeries.
- 4 projects in atrial fibrillation, impacting 8 GP surgeries.

A survey conducted with the Fellows at the end of the Fellowship (n=47) revealed that as a result of the Fellowship:

- 98% felt more confident in delivering care to patients at risk of CVD.
- 96% agreed they were supporting colleagues more with CVD care (eg raising awareness, sharing educational materials).
- 95% felt their patients at risk of CVD had benefited.
- 74% felt their PCN/practice had improved the way it manages patients at risk of CVD.

Overall, primary care practitioners considered the Fellowship program as highly relevant and beneficial to patient care. Stories shared by Fellows of patients they saw throughout their project and feedback from patients given to Fellows has been collated in a slide deck published on the [HIN South London website here](#).

More information can be found on the [HIN South London website](#).

■ Recognition and Use of the Wide Workforce - a Focus on Pharmacy Technicians

Using the workforce differently can help to relieve clinical pressures when identifying and managing people with lipid disorders. In the North East and North Cumbria, the AHSN NENC has piloted a project which utilises the skill set and knowledge base of Pharmacy Technicians in GP practices for secondary prevention patients.

Using the workforce differently can help to relieve clinical pressures when identifying and managing people with lipid disorders. In the North East and North Cumbria, the AHSN NENC has piloted a project which utilises the skill set and knowledge base of Pharmacy Technicians in GP practices for secondary prevention patients.

This project supports the reduction of health inequalities, by identifying and prioritising patients in greatest need of lipid optimisation. By using existing staff such as pharmacy technicians to identify patients at risk of a cardiac event using the Clinical Digital Resource Collaborative (CDRC – patient medical records search tool) it demonstrates use of the wider workforce, in general practice, in CVD prevention.

This project aimed to produce a standard best practice approach that can be shared and spread across primary care.

“Fantastic content. Very relevant to my role and to primary care. Good structure also. Great speakers.” PCN Clinical Pharmacist, East Twickenham PCN

Challenge/problem identified

Workforce constraints within primary care particularly in relation to GP time led to the conclusion that there were capacity issues within practices. This is based on a more traditional approach to delivering lipid optimisation work via GPs.

Prior to this project, it was not standard practice for pharmacy technicians to work in this area. Identifying, prioritising, and triaging the patients can be time consuming, and not the best use of GP or pharmacist time. If a pharmacy technician can undertake these initial stages, it releases GP and pharmacist's time and can speed up the process.

Action taken

Pharmacy technicians work with pharmacists and GPs and other health care professionals within general practice to enable a more timely approach to decision making, ensuring the patient receives the appropriate medications and treatment options, for lipid optimisation in secondary prevention patients.

The project team identified a cohort of ‘secondary prevention’ patients using CDRC searches. This list was triaged and the pharmacy technician made recommendations which were reviewed by the practice pharmacist who optimised patients' lipid lowering therapy, to help reduce the risk of further CVD events.

This work then led to the creation of resources to support pharmacy technicians, alongside the development of a pharmacy technician focus group to support those working on lipid management.

Outcome/progress to date

The pilot took place over a five-month period involving 19 days of pharmacy technician time. This is a cost saving equivalent of approximately £3,500, compared to a pharmacist doing this work. Over 10 resources are available, including “How to” guides, example of a data collection spreadsheet, progress table, pharmacy technician process map and FH checklist decision aid. The Pharmacy Technician Focus Group now has over 10 members and is growing.

Case study example

Over the five-month period, at one GP surgery, 326 patients were identified. Of these:

- 219 were reviewed by a pharmacy technician
- 173 referrals were made
- 77 were potentially eligible for Inclisiran
- 18 started Inclisiran
- 59 had their statin amended
- 35 had Ezetimibe recommended
- 29 required no follow up or were at target

Benefits

- By using the right people at the right time, we can release capacity within the system.
- Patient impact – reduce the risk of further cardiac events/strokes.
- Uniformity and ability to replicate - this project aimed to produce a standard best practice approach that can be shared, replicated and spread across primary care, including a Process Map outlining the pharmacy technician role.

“The vast knowledge I have gained from the project has made me feel confident and passionate about helping people receive the best lipid treatment for them. The training and support around me as a technician has allowed me to explore and learn the developing treatment options available. My role has assisted pharmacists and GPs - highlighting the importance of a pharmacy technician. I feel I'm actively making a difference to people's lives.” Louise Price, Pharmacy Technician

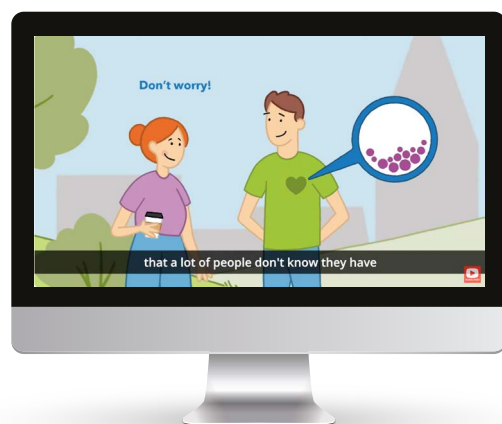
Demystifying Genetics to Patients - What is FH? Animation

In the North East and North Cumbria, partners have worked together to produce a short animation to raise awareness of the genetic condition, Familial Hypercholesterolemia and encourage families to get tested. The animation has so far had 7,000 views and has been localised and adopted in other UK regions.

Challenge/problem identified

Familial Hypercholesterolemia (FH) is a condition that affects 1 in 250 people in the UK, but over 80% of cases are undiagnosed. Untreated, FH can lead to heart disease, but early diagnosis reduces this risk and can help ensure that people with FH have a normal life expectancy.

The AHSN NENC wanted to raise awareness of FH, provide a simplified, easy-to-understand how the condition is passed on through families, and encourage those at risk to get tested.



Action taken

In conjunction with partners, the AHSN NENC produced a What is FH? animation, a two-minute video with an aim to demystify genetics for patients, and to encourage those diagnosed with Familial Hypercholesterolemia (FH) to talk to other family members, encouraging them to get tested. The video was produced in collaboration with HEART UK, two of their patient ambassadors, the Northern Genetics Service, and the AHSN NENC. **Watch the video at: <https://www.youtube.com/watch?v=BSHTduBO-F0>**

Outcome/progress to date

Since the animation was created in 2021, there have been almost 7,000 views to date (July 2023)

The video has since also been adopted for best practice by another region - in the East of England by Eastern AHSN, in conjunction with East GMSA and East GLH. The partners are using the video as part of their FH pilot in conjunction with Norfolk and Norwich University Hospitals Foundation Trust. We have developed a version of the animation which has allowed them to regionalise the video for a local impact, by replacing North East logos with their own, but AHSN NENC have been acknowledged and thanked.

Further projects and resources

In addition to the animation, the AHSN NENC continues to spread the word about FH to educate healthcare professionals, patients and the wider public about the importance of getting tested and making lifestyle changes to improve health. This includes:

- Promoting a suite of short films featuring families that are living with Familial Hypercholesterolaemia (FH) to raise awareness of the condition. The three films, funded by Northern England Clinical Networks and supported by HEART UK, offer an insight into what FH is and what it is like to live with from the perspective of the Middleton and Ryder families. **Watch the videos at: <https://www.heartuk.org.uk/cholesterol/being-a-parent>**
- Supporting national and international days such as International DNA Day and Jeans for Genes week to increase awareness of FH and highlight supporting resources to healthcare professionals.
- Working collaboratively with Yorkshire and Humber AHSN, AHSN NENC hosted a FH and lipids workforce workshop examining competencies for working within the FH field. These are currently being tested by Yorkshire and Humber.
- Three North East and North Cumbria practices have participated in the Child Parent Screening Service pilot project which is designed to test children at their one-year immunisation appointment for FH. This enables reverse cascade testing from child to parents.

There has been increased detection of FH in the North East and North Cumbria from 9.0% (1.11.2020) to 11.1% (28.2.23). The England identification for FH is 5.8% and for the UK 7.7%.

“The What is FH? video is an engaging tool for patients and the public that breaks down and simplifies a rare genetic disease in a short, effective and snappy video.”
Nick Pringle, CVD Programme Lead, Eastern AHSN

A New Focus of Lipid-lowering Therapy for Secondary Prevention Vascular and Diabetic Foot Patients in a Pharmacist-led Clinic

A study reviewing patients attending vascular clinics or diabetic foot clinics has led to the creation of a pharmacist-led clinic for this cohort of patients. This is thought to be the first clinic of its kind in the UK.

The North East based clinic provides lipid optimisation of secondary prevention for high risk vascular and diabetic foot patients.

The two-year pilot aimed to reduce health inequalities and minimise the risk of patients developing further cardiovascular disease.

Challenge/problem identified

Patients attending vascular clinics or diabetic foot clinics often have atherosclerotic disease and are at increased risk for the recurrence of vascular events. These patients merit high-intensity lipid-modifying therapy to maintain secondary prevention targets to reduce their risk of further disease.

By targeting those identified at elevated risk, a significant impact could be made by reducing risk of cardiovascular events through lipid optimisation and reduction of cholesterol.

The LDL cholesterol reductions achieved for vascular outpatients and diabetic foot MDT patients would, if maintained, correspond to relative risk reductions in major vascular events of >19% and >31% respectively.

This study evaluated the impact of a pharmacist-led lipid optimisation clinic for secondary prevention in this cohort of patients.

Action taken

A baseline audit highlighted that most patients were not treated to secondary prevention targets, which led to the creation of the clinic.

The following actions were taken:

- Post identification of eligible patients, telephone consultations were held with patients
- Individualised treatment prescribed and/or advice provided to the GP for action
- Reviewed impact of lipid optimisation approximately 6-8 weeks later through reviewing lipid profiles and LFTs (Liver Function Tests).
- Outcome/progress to date
- Of 216 patients (144 male and 72 female) with a mean age of 69.3 years:
 - 166 (77%) were on statins
 - Pre-optimisation, 175 (81%) were above target of non-HDL of 2.5 mmol/l (mean 3.51 mmol/l) and required optimisation which led to a significant reduction in total cholesterol, triglycerides and non-HDL to a mean of 2.44 mmol/l

“By reviewing these cohorts of patients and working with their GP when necessary, we have achieved a significant reduction in non-HDL cholesterol following review in clinic. When maintained, this is expected to reduce these patients’ risk of having a major vascular event. This project also saw benefit to a cohort of patients who live in areas with high levels of deprivation. These patients often have limited access to specialist services due to lack of transport and mobility, and therefore suffer poorer health outcomes.” Matthew Hart, Specialist Clinical Pharmacist, The Newcastle Upon Tyne Hospitals NHS Foundation Trust, led the study and clinic

Outcome/progress to date

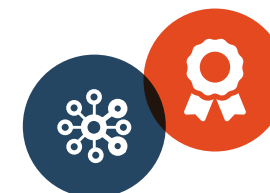
Of 216 patients (144 male and 72 female) with a mean age of 69.3 years:

- 166 (77%) were on statins
- Pre-optimisation, 175 (81%) were above target of non-HDL of 2.5 mmol/l (mean 3.51 mmol/l) and required optimisation which led to a significant reduction in total cholesterol, triglycerides and non-HDL to a mean of 2.44 mmol/l
- Post-optimisation, 92 out of 133 (69%) were at target O.R. 2.95 (1.92 – 4.55), $p < .001$ of being at target equivalent to an NNT=2. Calculated LDL levels (Friedewald) show a mean reduction of 0.83 (0.68 – 0.98) mmol/l for vascular patients and 1.39 (0.78 – 2.01) mmol/l for diabetic foot patients due to the intervention.

Benefits

The LDL cholesterol reductions achieved for vascular outpatients and diabetic foot MDT patients would, if maintained, correspond to relative risk reductions in major vascular events of >19% and >31% respectively.

Reductions in lipid levels are achieved as patients’ adhere to medicines prescribed. This is reflected by the statistical significant reductions in total cholesterol, triglycerides and non-HDL cholesterol (p -value < 0.05) post review in clinic.



IMpulse CVD LM Workshops

IMpulse CVD is an ambitious collaborative education & training (E&T) project led by the WMAHSN, with support from the, [The British Heart Foundation](#), [Office for Health Improvement & Disparities \(OHID\)](#) and industry partners.

The aim is to deliver on the cardiovascular ambitions outlined in the [NHS Long Term Plan](#) and meet the requirements of the [CVD Primary Care Network Direct Enhanced Service \(PCN DES\)](#).

The project consists of CVD workshops, the showcasing of the content has been uniform throughout the West Midlands region and delivered by local experts from both primary and secondary care. It also meets the secondary driver objective; to facilitate the development of peer networks. Bringing together colleagues from all sectors of healthcare provides an opportunity to embed support mechanisms within clinical pathways to optimise the management of people with high-risk conditions such as AF, HTN, hypercholesterolaemia or HF.

Challenge/problem identified

There has been an impact on the number of patients with CVD whose care is effectively managed during the pandemic as they stayed away from GP practices or haven't been followed up.

This has resulted in a [reduction in patients attending cardiology services and a rise in heart failure hospitalisations and deaths](#).

In addition, the original mode of delivery for the education and training sessions needed to be adapted following the pandemic in order to still reach primary care given the addition of remote working.

In order to prevent the patient having a heart attack, stroke or worse, by 'Detecting AF, HTN, Hypocholesterolaemia and/or HF in a patient, this enables the GP to 'Protect' the patient by prescribing suitable medication and 'Perfect'ing the patient by monitoring they are still both taking the medication and that the patient is still on the right medication for them.

Overview of Innovation

To provide practical upskilling workshops to all healthcare professionals in primary care who are involved in the diagnosis and management of hypercholesterolaemia, ensuring equity of care delivered in this specialty across the whole of the West Midlands region.

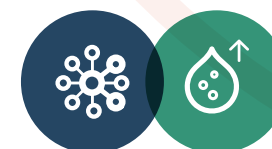
Actions taken/progress to date

WMAHSN collaborated with the Sustainable Transformation Partnerships (STP) Integrated Care Systems (ICS) Education & Training Hubs, University Hospitals of North Midlands NHS Trust (UHNM), the Centre for Pharmacy Post Graduate Education (CPPE) and the Midlands Practice Pharmacy Network (MPPN) to deliver 36 lipid management workshops. These took place in all 6 STP regions during 2021-23.

WMAHSN identified enthusiastic local experts in CVD from primary and secondary care who had experience in providing education to their peers to deliver workshops using WMAHSN-developed content.

Outcome/impact

- 72 hours of training
- 36 workshops
- 934 attendees
- From Nov 21 to Mar 22, 535 people registered to 16 Workshops, 403 attended/upskilled (75.33%) in 30.5 hrs
- From 1/4/22 to 30/6/22 205 people registered to 7 Workshops, 159 attended/upskilled (77.56% attendance) in 10 hrs
- From 1/7/22 to 30/9/22 89 people registered to 2 Workshops, 44 attended/upskilled (49.43% attendance) in 4 hrs
- From 1/10/22 to 31/12/22 395 people registered to 9 Workshops, 292 attended/upskilled (73.92% attendance) in 24.5 hrs
- From 1/1/23 to 31/3/23 - no LM workshops delivered
- From 1/4/23 to 30/6/23 58 people registered to 2 Workshops, 36 attended/upskilled (62.07% attendance) in 3 hrs



IMpulse CVD LM Workshops

Benefit

More than 900 people upskilled in LM, majority of whom reported improved confidence to identify and manage patients with hypercholesterolaemia.

Impact to patients, the NHS and the AHSN:

Further work identified and implemented as a result of sessions such as:

- Early adopter sites of the tools offered within the training, identified
- Clinical champions recruited
- Gaps in service provision identified that have led to further projects

Outcomes:

- Short term – pre vs post workshop questionnaire differences
- Medium term – pre vs post (3/6months and ongoing) disease prevalence on practice registers
- Long term – long term (5/10 years etc) changes in morbidity/mortality
- Possibly attempt to quantify savings made to NHS at each stage, think of flipping 'size of the prize' on its head:

Health inequalities targeted:

- Our target population
- Levels of attendance in the area and what this actually means for these populations in terms of equitable access to services

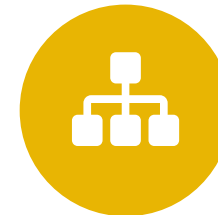
E&T gives us insight at a PCN level and helps us gauge which PCN's (or specific practices) may want to be involved in the projects we are running/or require further support. Also helps identify those early adopters that could be used for impact reports or case study reports.

Events enable peer to peer support, sharing of ideas, pitfalls and good practice.

"I have gained a better understanding of the lipid profile and the implications for patients; this will improve my management of patients with hypercholesterolaemia and/or FH and give me the confidence to have an informed discussion with patients to promote shared decision making."
Practice Nurse, Kingswinford

For more information regarding work around Lipid Management please contact:
Blair Elliott blair.elliott@wmahsn.org or Deepa Dadhanian deepa.dadhanian@wmahsn.org

For more information on the education and training sessions please contact:
Lesley Devaney lesley.devaney@wmahsn.org



Cheshire and Merseyside Child Parent Screening Service Pilot



Three regional practices have since 2021 offered an infant heel prick blood test to screen for Familial Hypercholesterolaemia (FH). FH is a genetic condition causing high cholesterol, leading to increased risk of heart attack or stroke under the age of 50. 190 infants have been screened; 10 of whom meet the criteria for genetic testing for FH. Several others have presented with raised cholesterol requiring monitoring. Lifestyle guidance had been provided to each family, supporting development of healthy habits at an early age. (83)

Screening is completed via a point of care capillary blood test, taken during infants' routine 12 month immunisation appointment. Early identification facilitates timely monitoring and management, reducing the risk of premature cardiovascular disease, in line with the NHS Long Term Plan. FH affects 1 in 250 people and the child-parent screening service (CPSS) facilitates cascade testing for family members if the gene is identified, enabling crucial case-finding and management at the earliest opportunity.

Overview of Innovation

Parents were offered an FH screening test for their infant during their routine 12 month immunisation appointment. This involved a heel prick capillary blood test, analysed via Afinion 2™ point of care testing device which reported blood cholesterol levels and indicated the presence/absence of the FH gene. Ongoing monitoring and/or cascade testing thus ensued, as appropriate, dependent on the test result.

Actions taken/progress to date

During the CPSS pilot's phased introduction, learnings were shared among participating practices and Cheshire and Merseyside has remained one of the most successful recruitment regions. Awareness for the service has increased and clinicians have been approached by other regions to share their experiences and recommendations for successful service implementation.

Delivery of the screening service has enabled practices to connect with parents at the earliest opportunity for their child; raising awareness for FH and associated risks if left unidentified/untreated. Practices are provided the opportunity to promote awareness for cardiovascular health and the importance of testing infants for possible FH in families with a history of premature cardiovascular events.

The service has been promoted regularly via regional newsletter, educational webinars and specialist clinical forums. Interest remains high among practice teams and CPSS features as a core element of the Cheshire and Merseyside Lifespan Pathway for Lipids 2023.

Outcome/impact

190 infants have been screened between November 2021 and June 2023. Of these, 10 individual point of care test results indicated raised cholesterol levels, meeting the criteria for genetic testing. No genetic tests have yet resulted in a positive FH result, however, this does not necessarily indicate an absence of the FH gene. These infants will receive regular monitoring and repeat future testing, if indicated.

The benefits of raising awareness for avoidable premature CVD are widespread. 190 families in Cheshire and Merseyside have, as a result of their engagement with CPSS, received lifestyle counselling regarding healthy lifestyle management, diet and nutrition for themselves and wider family members.

CPSS has dovetailed with the launch of the Cheshire and Merseyside FH Service, supporting families across the region to identify and manage new diagnoses of FH, including cascade testing for relatives of FH-positive patients. The two services have facilitated a bottom up and top down approach to FH identification, enabling timely identification of FH and enabling appropriate therapeutic management; thus aiming to prevent further cases of premature cardiovascular disease.

Benefit

Benefits for patients have included awareness-raising for FH itself and in the context of cardiovascular disease and its associated risks. Families have been provided lifestyle counselling regarding diet, exercise, nutrition and healthy behaviours, at a crucial developmental milestone for their child. Infants requiring cholesterol monitoring will receive regular reviews and therapeutic intervention, if indicated, at the appropriate time, to safeguard against premature cardiovascular disease.

Practice staff have increased their confidence and competence in assessing for and managing high cholesterol in infants, which should, in turn, translate into NHS cost savings through a preventative, rather than curative approach to cardiovascular disease management from childhood.

"The national Child Parent Screening Service (CPSS) has been popular with our families. So much so that we have had parents asking for their child to be screened who are too old to meet the inclusion criteria. It's been a great opportunity to educate our population, both on what Familial Hypercholesterolaemia (FH) is and how a healthy lifestyle can improve the risk of developing CVD. This increased awareness will benefit our whole population in the future, to work toward reducing the risk of premature cardiovascular disease." Dr Sue Kemsley, GPwER Cardiology at Swanlow Medical Centre and Clinical Lipid Lead for Cheshire and Merseyside



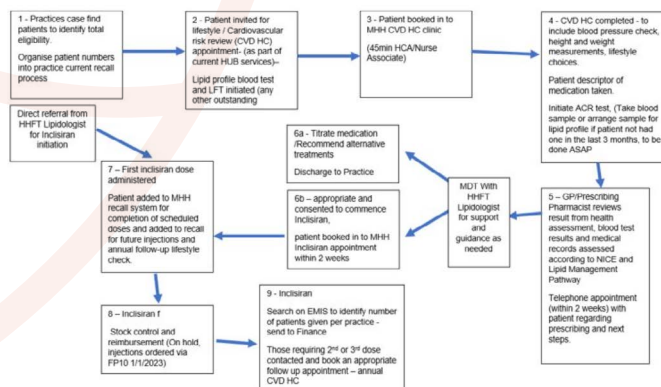
Mid Hampshire Healthcare - Cardiovascular Risk Review

Mid Hampshire Healthcare (MHH) is a GP Federation that was created in 2014 and covers the Winchester and Andover regions of Hampshire (4PCNs/18 Practices). In the first quarter of 22/23 MHH entered into a **collaborative working partnership** with Novartis enabling the setup and launch of a lipid management clinic across the GP Federation practices, taking into consideration the new/updated **lipid management pathway** and addressing the future of lipid management within Primary Care. The service is for secondary prevention and includes where appropriate the new injectable therapy Inclisiran. Wessex Academic Health Science Network (AHSN) has provided project management resource and chairs the regular working group meetings.

Overview of Innovation

Patients are identified via an initial search run in the practice's clinical system either by the practice team or remotely via Mid Hampshire Healthcare (MHH) or the Hampshire and Isle of Wight central pharmacist's team. MHH review the results and manually identify patients who meet the criteria (age/lipid profile/correctly coded). A list of those identified by the initial search but not meeting the criteria is returned to the practice for review and potential optimisation of existing therapies (if required). Patients identified as being suitable follow the pathway (see below) involving an initial telephone call, cardiovascular risk review and blood test and follow up call with a GP/Prescribing Pharmacist who recommends treatment based on the results of the blood test and review. If the recommendation is to titrate existing medication or try alternative treatments, the patient is referred back to their practice. If Inclisiran is suitable they are booked in for their initial loading dose and subsequent injections at an initial 3 and then 6 monthly intervals. If specialist guidance is required

MHH refer back to the patient's practice and/or consult with a Consultant Chemical Pathologist.



Outcome/impact

Over 1000 patients from 14 different practices have been reviewed remotely and those meeting the required criteria have been invited to attend a cardiovascular risk review clinic. Lists of patients that might benefit from a review of their existing medication, but were unsuitable for the service, have been returned to their practices. To date over 60 patients have been initiated on inclisiran.

Benefit

The following case studies show the benefit in cholesterol reduction of 2 patients that experienced the service and were initiated on Inclisiran:

Case Study 1 ●	Case Study 2 ●
65yr old male with a family history of high cholesterol	79yr old male
Coronary angioplasty and stent insertion to relieve a blocked artery	Stent insertion in the left anterior descending artery (LAD)
2014	2011
<ul style="list-style-type: none"> Existing medication: <ul style="list-style-type: none"> Amlodipine 5mg - Ramipril 10mg Aspirin 75mg - Rosuvastatin 40mg 	<ul style="list-style-type: none"> Existing medication: <ul style="list-style-type: none"> Atenolol 50mg - Aspirin 75mg Omeprazole 40mg - Atorvastatin 80mg Tamsulosin 400microgram
Initial phone call with nurse and invitation to a lifestyle/cardiovascular risk review	Initial phone call with nurse and invitation to a lifestyle/cardiovascular risk review
1/9/22	1/9/22
Face to face lifestyle/cardiovascular risk review with nurse	Face to face lifestyle/cardiovascular risk review with nurse
8/9/22	8/9/22
<ul style="list-style-type: none"> Initial blood test results <ul style="list-style-type: none"> Cholesterol 4.6 - Triglyceride 2.36 HDL 0.97 - LDL 2.6 Cholesterol HDL Ratio 4.7 	<ul style="list-style-type: none"> Initial blood test results <ul style="list-style-type: none"> Cholesterol 7.0 - Triglyceride 4.68 HDL 1.07 - Cholesterol HDL Ratio 6.5 LDL - Unable to calculate as Triglyceride >4.5
Sept 22	Sept 22
Clinical review via phone with GP with recommendation to commence treatment - Inclisiran (case also discussed with a consultant chemical pathologist)	Clinical review via phone with GP with recommendation to commence treatment - Inclisiran
21/9/22	21/9/22
Inclisiran 1 st dose	Inclisiran 1 st dose
24/11/22	24/11/22
2nd blood test results	2nd blood test results
Feb 23	Feb 23
<ul style="list-style-type: none"> Cholesterol 3.4 - Triglyceride 1.78 HDL 1.19 - LDL 1.4 Cholesterol HDL Ratio 2.9 	<ul style="list-style-type: none"> Cholesterol 4.0 - Triglyceride 1.31 HDL 1.27 - LDL 2.1 Cholesterol HDL Ratio 3.1
24/2/23	24/2/23
Inclisiran 2 nd dose	Inclisiran 2 nd dose

Support provided by AHSN

Wessex AHSN provided project management support and chairs the working group meetings. We also organised an educational webinar to promote the service, raise awareness and provide lipid management advice/guidance. One of our clinical leads is a Consultant Chemical Pathologist at Hampshire Hospitals, attends the working group meetings and supports the project. As part of our support, **Wessex AHSN produced an implementation report.**

Practical implementation of the Lipid Management Pathway



This education event was a pre recorded conversation (round table discussion) between primary and secondary care clinicians, describing the implementation model of the Lipid Management Pathway in a Lincolnshire practice. The conversation is pitched in a relaxed but informative way, and discusses their experiences in setting up this pathway including the use of novel therapies such as Inclisiran, challenges faced, solutions and best practice. The clinicians also answer questions they are most frequently asked and share inside knowledge of how this has worked in their practice, as well as sharing case studies of patients treated on the pathway.

[Watch the recording here.](#)

Overview of Innovation

A pre recorded 'relaxed' conversation between clinicians, providing insights into their experiences of implementing the Lipid Management Pathway in a Lincolnshire practice. The recording was innovative in the sense that it wasn't set up as a traditional formal online event and allowed stakeholders to watch it at a time convenient for them.

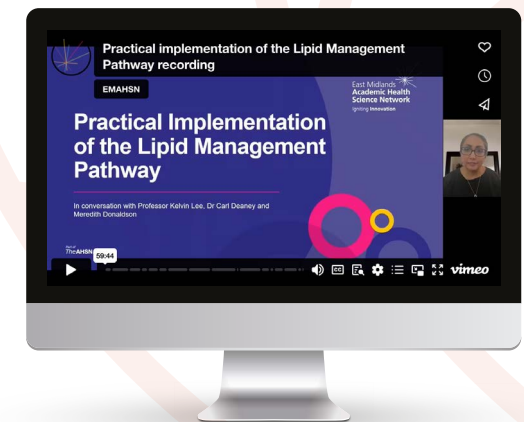
Outcome/impact

- 237 people registered to receive the recording.
- 502 people have accessed the link, indicating it has been shared.
- 180 different people have watched it 211 times, indicating multiple repeat watches.
- It was filmed in March but is still getting views.

Benefit

Staff - received first hand knowledge from clinicians who have used the lipid management pathway, with tips on how to get started at a practice level. This will hopefully give clinicians listening the confidence to get started on an individual level.

Patients - increase in staff knowledge and confidence in use of novel therapies as well as implementing the lipid management pathway will ultimately impact patients CVD health and risk of events.



■ **BLMK Community Lipid Service - Oxford Pathway**

In order to address variation in lipid management across Bedfordshire Luton and Milton Keynes (BLMK) and to reduce the future burden of CVD, a community lipid clinic was established. This clinic is delivered by local GP federations and takes referrals for people with known CVD and LDL >2.6mmol/L as well as those with suspected FH. Over the first year of operation the clinic has reviewed 1160 patients. Nearly 50% of people with pre-existing CVD have had a new lipid lowering therapy initiated and the remainder have had their lipid lowering therapy optimised or been counselled on the importance of medication adherence and lifestyle measures. The clinic has been well received by patients, referrers and secondary care lipid services.

Challenge/problem identified

Prior to starting this work, lipid management in across BLMK was variable and influenced by differences in pathology reporting, capacity in General Practice, prescribing behaviours and access to specialist input. With no intermediate levels clinics available, the lipid clinics were overwhelmed with activity which did not require specialist input, resulting in long waiting times for people who did require specialist management.



Overview

The aim of the project was to drive transformation across the lipid management pathway for people with CVD and FH in Bedfordshire, Luton and Milton Keynes through establishing a community lipid service. The community lipid service is provided by local GP federations and extended access service providers.

The service assesses and manages people with suspected FH, as well as those with known CVD or FH with highly uncontrolled hypercholesterolaemia (LDL>2.6mmol/L). The clinic:

- Uses protocol guided care, through clinical pharmacist led clinics, supported by GPs with a specialist interest
- Provides a standardised, evidence-based treatment pathway (including monitoring of effectiveness and tolerability) in line with the AAC lipid management pathway
- Provides reviews (usually remote but face-to-face if needed), utilising the local GP system so that the consultation could be completed directly into the person's clinical record
- Arranges follow-up blood tests and appointments to limit the impact on GP practices
- Provides clinical assessment for FH in people with suggestive clinical features and refers onward where they meet the criteria for genetic testing
- Offers inclisiran initiation for eligible patients
- Provides onward referral for people with uncontrolled hypercholesterolaemia, despite progression through the treatment pathway, to secondary care lipid services (e.g. if PCSK-9 inhibitor treatment indicated)

Outcome/impact

To date 1161 patients have received a review. 59% of referrals have been for FH assessment and 41% for people with known CVD and LDL >2.6mmol/L. Nearly 50% of those referred with CVD and uncontrolled hypercholesterolaemia have had a new

Benefit

There has been good engagement from clinicians across the system. Primary care clinicians have welcomed the service as it provides timely management for those at highest risk of CVD events (i.e. those with CVD or FH) who have unmet need requiring additional input or the initiation of novel therapies. SystemOne searches have been developed to assist with identifying suitable people for referral and most PCNs/practices are using a combination of targeted and opportunistic referral into the service.

Secondary care clinicians have been highly supportive of the community lipid service. They were engaged early in the process and were involved in developing the referral criteria and pathway. Secondary care lipid clinics across BLMK have significant waiting times and much of their usual caseload would be suitable for the community lipid service (such as statin intolerance).

The community lipid service also absorbed the flow of lipid-related referrals resulting from the PCN DES IIF CVD-03 indicator in 2022/23. This incentivised referral of people who had ever had a sufficiently raised cholesterol result to specialist lipid services for FH assessment. Given secondary care lipid services already had around a one-year waiting list, this indicator had the potential to destabilise specialist provision and completely overload secondary care lipid services.

Working with a local GP federation has supported confidence and trust in the community lipid clinic from local GP practices from the outset. It has also helped in navigating unforeseen issues and provided a new model within BLMK for similar service provision in the future.



Developing the Greater Manchester Lipid Management Pathway and Resources

The approach used to deliver the national lipid programme at pace and scale across Greater Manchester to achieve key programme outcomes for a sustainable delivery.

Historically the innovation cycle in healthcare is slow, the uptake of innovation is unequal, the innovation partners struggle to engage with health and care systems and there are unrealised opportunities to deliver local economic benefits from health innovation assets.

The roll out of the national lipid programme is an ideal use case to test our approach to tackling these problems.

The ask

Optimisation of lipid lowering therapies

- Access to high intensity statins, ezetimibe and PCSK9i's
- Systematic application of both primary and secondary prevention principles

Delivery of a novel therapies (Inclisiran)

- National roll out of Inclisiran
- Primary care delivery

Case-finding

- Develop identification tool for people requiring lipid optimisation (secondary prevention)

The approach

An agile methodology was used in a series of project sprints to develop the GM pathway and resources at pace. This was initiated by a stakeholder workshop to identify barriers to the programme and followed by a task and finish group made up on clinicians from the ICB, primary care and secondary care to deliver the outputs.

Challenge/problem identified

The following points were challenges identified in the initial stages of the programme. These were identified through direct engagement with primary care and through our initial stakeholder workshop.

- Position statements from influential organisations on an injectable lipid lowering treatment was a barrier for primary care engagement in the programme
- Mixed messages around lipid pathway and lengthy implementation tools
- Unclear on how to take this forward as a system
- Influential stakeholders questioned the drivers and challenged the delivery
- Primary care workforce capacity – combined with lack of financial incentives in primary care for lipid management (QOF/ IIF)

Overview of Innovation

An agile, integrated operating model to deploy the lipid programme at pace and scale across Greater Manchester. This was through integration of HINMs functions: digital strategy, business insights and benefits realisation, strategic industry partnerships and academic partnerships, as well as patient and public involvement and GM system engagement.

Actions taken/progress to date

The deployment model was multifaceted:

Engagement

We engaged with:

- ICB executive
- ICB governance structures
- Localities
- Primary care
- at risk communities

Engagement was extensive and time consuming. It required raising awareness, education, winning of hearts and minds as well as concerted efforts to overcome pockets of resistance

Resources

We coproduced:

- GM lipid management resources
- Inclisiran prescribing toolkit
- Interactive GM CVD Toolkit for primary care
- GM secondary prevention lipid management pathway

Tools

- We developed the GM case finding tool, integrated with all GP practice records.
- Searches replicated in the GM Care Record (longitudinal record) enabling GM level data and real time metrics

System approval

All relevant pathways, procedures and materials were approved by relevant governance fora, including Greater Manchester Medicines Management Group.





Developing the Greater Manchester Lipid Management Pathway and Resources

Outcomes

GM lipid case finding tool integrated across primary care in GM as we as nationally. The tool is now highly regarded as an accurate case finding tool for lipid management beyond application in Greater Manchester. Aligned guidelines across Greater Manchester – GM Lipid Management Pathway for Secondary Prevention CVD and alignment of LDL-C testing for labs across Greater Manchester.

System approach to programme delivery- alignment with the HINM and ICB CVD teams and creation of ICB governance routes for CVD, such as the GM CVD Prevention Oversight Group

Lipid resources - creation of lipid management webinars, CVD events, lipid podcast, guidance documents for lipid lowering treatments and patient leaflets, FAQ page, CVD toolkit.

Impact

All Primary Care Networks across Greater Manchester are now focused on optimising cholesterol management for those patients at highest risk, including patients who have previously had a cardiovascular event. 82% GM PCNs have initiated lipid clinics in primary care and the remaining 18% are engaged and in the process of planning delivery.

The lipid resources page is the most viewed page on the HInM website and is the main resources page for GM ICB.

Numerous lipid management education events have been held with GPs, practice managers, nurses and other primary care health and care professionals, including over 300 registrants for the HInM 'Managing Cholesterol in Greater Manchester' event held in February 2023

From April 2022-March 2023: 502,332 patients across Greater Manchester have been prescribed lipid-regulating drugs over the last 12 monthslipid lowering therapy initiated.

Benefit

Patient story - Living with cardiovascular disease – Muz's story - Health Innovation Manchester Impact of the new lipid management pathways for optimising patient treatment for lipid lowering therapies

Related links, references and further resources
[CVD Prevention: Lipid Pathway - Resources for Health and Care - Health Innovation Manchester](#)



“Prevention in the NHS has not received much focus and we are delighted to deliver proactive care to our citizens to prevent disease rather than just cure it. GM believes in a population model of health creation and this helps us deliver that strategy” Dr Tracey Vell MBE, Chief Officer, Greater Manchester Primary Care Provider Board Medical Director, Health Innovation Manchester



Lipid Optimisation Programme: Redbridge, North-East London (UCLP)

North East London (NEL) Sustainability and Transformation Partnership was focused on working together with integrated services across primary and secondary care to:

- **Address the community's health inequalities**
- **Reduce premature Cardiovascular Disease (CVD) mortality**
- **Deliver consistent high-quality services.**

Barts Health NHS Trust, East London Cardiovascular Disease Prevention (ELoPE) department developed a new clinical pathway initiative (CPI) for lipid optimisation in everyday practice. The focus was to integrate innovative technologies (high intensity statins, ezetimibe and PCSK9 inhibitors) into primary care to improve lipid optimisation in everyday practice. Various resources, as well as an education and training programme, were developed to support the roll-out of the programme, some of which have been sustained. Overall, this partnership provided patients with access to innovations that continue to help deliver excellent care; a 25% improvement of lipid lowering therapies for optimal CVD secondary prevention.

Challenge/problem identified

Atherosclerotic cardiovascular disease (ASCVD) is a leading cause of mortality worldwide. The relationship of hypercholesterolaemia to ASCVD is well established. Further, the reduction of low-density lipoprotein (LDL) with lipid modification treatments has been shown to reduce the risk of ASCVD events and mortality (1, 2).

NEL has a high prevalence of CVD and some of the most ethnically diverse and deprived populations in England. Recent data suggests there are 130,000 people living with CVD in NEL with 220 deaths recorded each month due to heart and circulatory diseases.

In September 2021, Redbridge had 11,233 high risk people with CVD listed in the coronary artery disease (CAD), stroke and peripheral artery disease (PAD) registers of 42 general practitioners (GP) practices. Using UCLP proactive care framework (PCF) tools, 90% of people with CVD would benefit from optimising their lipid-lowering treatment. High risk people with established CVD and not taking a statin were prioritised; reflective of 20% of the CVD register (3).

Overview of Innovation

The CPI involved input from a multidisciplinary team across the integrated care system to:

- Identify people with/ at risk of CVD;
- Optimise preventative medication usage and improve access to new therapies;
- Treat patients closer to home without the need for onward referral;
- Reduce health inequalities and premature CVD deaths

Actions taken/Progress to date

A collaborative approach addressed the national CVD prevention agenda and unmet need of the local population of NEL. The Pathway Transformation Fund, from NHS England was approved for 2021/22 and Redbridge was defined as the first borough for phase 1 of the CPI.

Lipid management guidelines produced by the NHS Accelerated Access Collaborative, UCLP's Proactive Care Frameworks and local services were used to deliver evidence-based, sustainable local services for its communities while reducing the incidence of heart attacks and strokes (4, 5, 6).

A specialist pharmacist developed an education and training programme for the primary care network (PCN) and practice-based pharmacists to support the lipid management of patients with CVD and to optimise prevention holistically. Multidisciplinary team meetings were held with outcomes documented into patients' notes, and referrals where appropriate, to support reviews of complex patients, bi-weekly CVD risk and lipids.

Regular working group meetings helped to monitor progress and review any challenges.

Outcome/Impact

Within the Redbridge Practices, the percentage of high-risk people with CVD and not on a statin reduced from 20% to 13.4% over the 12-month pilot programme. This equates to the prevention of 49 major vascular events over 5 years. In addition:

- 60% of people with CVD and not on a statin were not naive to treatment, therefore patients required longer consultations including motivational interviewing techniques, and educating the patient on lipid lowering therapies
- 7% of people with CVD, not on statin coded as statin-intolerant and were eligible for non-statin lipid lowering therapy
- 10% of people with CVD clinical coding required removal from the CVD registers.
- 10% of people were coded with personalised care adjustments for NACVD or risk outweighs benefit
- 5% of people declined lipid lowering therapy
- PCN pharmacists were more comfortable with optimising lipid lowering therapy to target rather than reviewing diagnosis and/ or discussing statin rechallenge with individuals, as part of routine reviews
- Specialist pharmacists focused on completing targeted reviews for people at high CVD risk, not on a statin, while PCN pharmacists were encouraged to complete opportunistic reviews in optimising lipid lowering therapy as part of their medication reviews

Improving Outcomes for People at Risk of Heart Attack and Stroke: Initiating Inclisiran for People Living with High Cholesterol

Inclisiran is a new treatment for people with cardiovascular disease whose cholesterol is still too high despite other treatments. It's given by injection six months and is a "gene silencing" drug that works by silencing the PCSK9 gene which boosts the liver's ability to remove LDL cholesterol. Reducing cholesterol is very effective at preventing heart attacks and strokes.

Cardiovascular disease is a major cause of death in England accounting for 27% deaths; furthermore CVD is strongly associated with health inequalities. Data also shows that premature CVD mortality is four times higher in the most deprived communities and that people from a black, Asian or minority ethnic background are more likely to be affected by CVD.

However, it is largely preventable through changes to lifestyle and though treatment of major risk factors like cholesterol. Lowering cholesterol levels especially in those who are highest risk would prevent large numbers of heart attacks and strokes.

This case study illustrates how Central Camden Primary Care Network utilised a centralised hub to deliver Inclisiran in addition to existing oral therapies or as an alternative to statins where these medications are contraindicated.

Challenge/problem identified

In Camden, men have greater inequality in life expectancy than women across the social gradient (11.3 vs. 9.4 fewer years) for living in the most deprived areas than those living in the least deprived areas in 2015-17. Men and women from the most deprived areas die 11 years or 9 years younger respectively than in the least deprived areas.

In some neighbourhoods in Camden, the levels of deprivation are within the top 10% to 20% in the UK and over 34% of Camden's residents are from Black, Asian and other ethnic backgrounds.

The COVID-19 pandemic highlighted the disproportionate impact of Covid on these same groups meaning delivery of the Covid vaccine back in 2021 was an absolute priority for Central Camden PCN. This community-hub based approach was extended to tackle high cholesterol.

Overview of innovation

During the COVID-19 pandemic, Central Camden PCN developed a centralised COVID vaccination service. This was the first time the practices had started to collaborate in response to the urgency of rolling out the COVID vaccine. This has since been adapted for the administration of Inclisiran offered in addition to existing available therapies for high cholesterol.

Actions taken/progress to date

Data sharing agreements were implemented so that centrally, the PCN could access the health records of every practice. Patients were identified and contacted for the COVID vaccine accordingly.

Central Camden PCN used the UCLP Proactive Care Framework search tool to identify patients eligible for Inclisiran; 200 patients were initially identified through these searches.

Care Coordinators contact eligible patients and schedule appropriately within pharmacist-led clinics; either in a local purpose built "Living Centre" in the heart of Kings Cross or within the extended access clinics in the various practices that make up the PCN.

The PCN also developed an EMIS-based referral mechanism so that when a practice identifies a patient that is eligible, they can refer them into the central hub.

Once the Inclisiran is administered, it is recorded into the patient record, enabling the practice to be able to view this information as well as the individual via the NHS app; enabling a single patient view.

Outcome/impact

To date 30-40 patients have received at least one dose of Inclisiran. For patients that have received their second dose, there has been a substantial drop in their LDL cholesterol levels, with decreases as high as 88%.

Case example:

52 year old Man with history of acute MI in 2022, previous MI earlier in the year – patient's main concern was to not have second episode

Existing Lipid treatment: Atorvastatin 80mg
Cholesterol on statin alone:
Total Cholesterol 4.5 mmol/l
LDL cholesterol 2.6 mmol/l

3 months after first dose of Inclisiran:
Total Cholesterol 2.59 mmol/l
LDL Cholesterol 0.31 mmol/l

Benefit

The injectable nature of Inclisiran has made it much easier to ensure medication adherence. In the past, the "fire-and-forget" nature of prescribing statins made it more difficult to ensure that patients are taking their medication correctly and on time. Patients also reported a higher sense of engagement in the process which translated into more acceptability in terms of taking statins. There have been positive impacts on the wider workforce. Clinical colleagues reported feeling more comfortable and confident with new treatment pathways.

Secondary Care Lipid Specialists supporting Primary Care Clinicians in Lipid Management

The Kent Surrey Sussex AHSN Lipid and FH programme takes a Population Health Management (PHM) approach by proportionately focusing on improving cardiovascular health of our target population through data driven planning and delivery of lipid optimisation care to achieve maximum impact on outcomes, this is supported by engagement, development of education/resources and local collaboration.

The programme is Primary Care led and Secondary Care supported to integrate services and the NICE approved lipid pathway, aiming to:

- Improve lipid detection and optimisation, upskill Primary Care to detect, triage and manage appropriate patients and increase prescribing to impact on patient outcomes.
- Establish a Lipid and FH Steering Group to drive the programme to improve patient care and outcomes with lipid experts from secondary care supporting, guiding, and educating Primary Care.
- Support and upskill primary care clinicians further with dedicated clinical leadership support, Lipids Community of Practice, education series, access to lipid specialists, resources, lipids data reports and patient experience feedback.

Challenge/problem identified

Across the KSS region, there are 12 hospitals with and 5 hospitals without lipid services with waits between 4-12 months. Up to 80% of referrals are rejected at triage in Kent and Sussex hospitals.

Consequently, workforce capacity cannot meet demand and there is an urgent need to integrate referral pathways to support clinic flow.

In July 2022, a [KSS Lipid Pathway Feedback Report](#) highlighted 5 areas of service challenges that are now the priority focus areas for the KSS Lipid & FH Steering Group: 1. Referrals, 2. Waiting times, 3. Education, 4. Coding 5. Workforce/Workload

Overview of innovation

KSS AHSN has established a KSS Lipids and FH Steering Group to bring together specialists to collaborate across the lipids management pathway, providing education and upskilling as well as developing a range of standardised protocols and pathways, including referral forms and pathways.

Outcome/impact

Actions taken/Progress to date

KSS AHSN and the KSS Lipids and FH Steering Group have produced a range of outputs for the benefit of clinicians and patients, including:

- Running the KSS Lipids Steering Group to drive the programme to improve patient care and outcomes.
- Hosting a Southeast CVD Education Programme (over 4,000 attendees in 2022/23)
- Producing a monthly Southeast ICS/PCN Lipid data dashboard (from 2021 to 2023) for KSS, Oxford, Wessex AHSNs, using Open Prescribing data on HIST, Ezetimibe, Bempedoic Acid, PCSK9i and Inclisiran. Data can be viewed by month or quarter at AHSN, ICB and PCN levels and includes PCN heat maps.
- From March 2023 the lipid dashboard is just produced for KSS, and we share the data with stakeholders in a monthly newsletter.
- Development of a range of CVD Central resources, available on the [CVD Central website](#).
- Development and launch of a new [Generic Lipid Referral Form V13x](#)

CVDPrevent summary page									
		A - Atrial Fibrillation		B - Blood Pressure		C - Cholesterol			
Reporting date	(Multiple values)	CVDP002AF - Percentage of patients aged 18 and over with GP recorded atrial fibrillation and a record of a CHA2DS2-VASc score of 2 or more, who are currently treated with anticoagulation dr...		CVDP007HYP - Percentage of patients aged 18 and over, with GP recorded hypertension, in whom the last blood pressure reading (measured in the preceding 12 months) is below the ag...		CVDP008CHOL - Primary Prevention. Percentage of patients aged 18 and over, with no GP recorded CVD and a GP recorded QRISK score of 10% or more, CKD (G3a to G5), T1 diabetes (a...		CVDP009CHOL - Secondary Prevention. Percentage of patients aged 18 and over with GP recorded CVD (narrow definition), who are currently treated with lipid lowering therapy	
		Dec 2022	Mar 2023	Dec 2022	Mar 2023	Dec 2022	Mar 2023	Dec 2022	Mar 2023
England		89.5%	90.4% (0.9%)	62.7%	68.1% (5.5%)	49.9%	51.2% (1.2%)	81.6%	82.2% (0.6%)
NHS Kent and Medway ICB		88.3%	90.2% (1.9%)	57.9%	66.2% (8.2%)	46.9%	48.4% (1.5%)	80.0%	80.6% (0.6%)
NHS Surrey Heartlands ICB		88.8%	89.9% (1.1%)	61.2%	68.9% (7.7%)	45.4%	46.6% (1.2%)	78.2%	79.0% (0.8%)
NHS Sussex ICB		88.2%	89.1% (0.9%)	59.7%	66.5% (6.8%)	46.4%	47.9% (1.5%)	78.7%	79.5% (0.7%)

Secondary Care Lipid Specialists Supporting Primary Care Clinicians in Lipid Management

Kent Surrey Sussex
Academic Health Science
Network

Outcome/impact

In the first year of the lipids programme, we had evidence that all 109 PCNs in KSS reached stage 5 of adopting the NICE approved Lipid Management pathway. Our reach and engagement with stakeholders has increased every year, we now have over 1,300 people on our mailing list, a dedicated community of practice/resources hub and a CVD Central website.

In 2021, we launched the **CVD Central website**. Resources have been well received, and are available for free to any organisation in the country to download directly:

- Results card for patient (credit card sized) – over 35,000 results cards have already been distributed around the country.
- Patient experience survey after first A,B,C check in any setting
- Patient experience survey one month later for patients found to have BP>140/90
- A,B,C Resource pack with clinical pathways and patient information
- Inclisiran Implementation and FAQs Resource Pack to support Primary Care
- Inclisiran Summary guide for sharing with patients.

In 2021/22 we collaborated with Amgen on a joint working project to develop an **FH Toolkit and data collection template** for primary care.

In 2021/22 KSS AHSN funded 35 places for KSS Pharmacists on the FH course at Northumbria University.

We work in collaboration with CardioMetaBology, who run a CVD education series dedicated to KSS health care professionals (8 CVD sessions took place in 2021/22 with 2000+ attending).

In 2023 - Development and launch of a new **Generic Lipid Referral Form V13** implemented in all Sussex and Kent & Medway GP practice's clinical systems. To guide GPs on lipid management and reduce the number of inappropriate referrals and in turn waiting lists in secondary care.

The CVDPrevent data we share in the monthly newsletter show that during the period spanning from December 2022 to March 2023, there has been a remarkable upswing in the performance of ICBs across the KSS region, particularly in terms of their efforts to address key Cardiovascular Disease Prevention (CVDPrevent) indicators, most notably blood pressure.

Benefit

The KSS Lipid dashboard and newsletters are a good example of data that is every month routinely published and discussed to support and encourage improvement. A product of a local collaborative of the specialist lipid teams, the dashboards are updated monthly, providing a means for primary and secondary care teams and commissioners to measure changes in lipid therapy prescribing in primary care and a benchmark for the 12 hospitals with lipid services across Kent Surrey and Sussex. The newsletters enable primary care, commissioners, and providers to examine and understand how they can deliver better care and outcomes for people with dyslipidaemia, enabling better access for patients to services and information and address the considerable variation that is often exposed.

Plans for the future/spread and adoption

We are establishing a Virtual MDT Lipid Clinic in a minimum of 60 PCNs across the KSS ICSs (delivered by a bank of Lipid Specialists). Working closely with them to offer AHSN programme support in a tailored package, this includes segmentation and patient risk stratification support to identify those at highest risk of CVD and eligible for lipid lowering therapies to prevent and reduce unwarranted variations in outcomes.



I Key Take Home Messages

The Lipid and FH national programme took an ABC approach to prevent CVD in recognition of the NHS CVD LTP ambitions

The national delivery model, embedded key policy drivers, promoting systematic detection of people at high risk of CVD through inclusive health checks, patient database searches, FH case finding as well as primary and secondary management of those with dyslipidaemia

The NICE endorsement pathway has been the programme's "Golden Thread" connecting all key stakeholders

Co-produced educational packages including the AHSN/HeartUK's Tackling Cholesterol Together were essential to system wide capacity and capability building

Equality Health Impact Assessment endorsed by NHSE ensured our programme was not tokenistic and did not widen health inequalities for people most at risk of CVD, with direct involvement from expert patients in key strategic working groups



The AHSN Network

For more information about past and future work, visit thehealthinnovationnetwork.co.uk You can also follow us on social media:

 [@HealthInnovNet](https://twitter.com/HealthInnovNet)

 [the-health-innovation-network](https://www.linkedin.com/company/the-health-innovation-network)

Connect With Us

Email: joe.chidanyika@ahsn-nenc.org.uk

Web: thehealthinnovationnetwork.co.uk/programmes/cardiovascular-disease

From 1st October 2023, we changed our name to The Health Innovation Network.