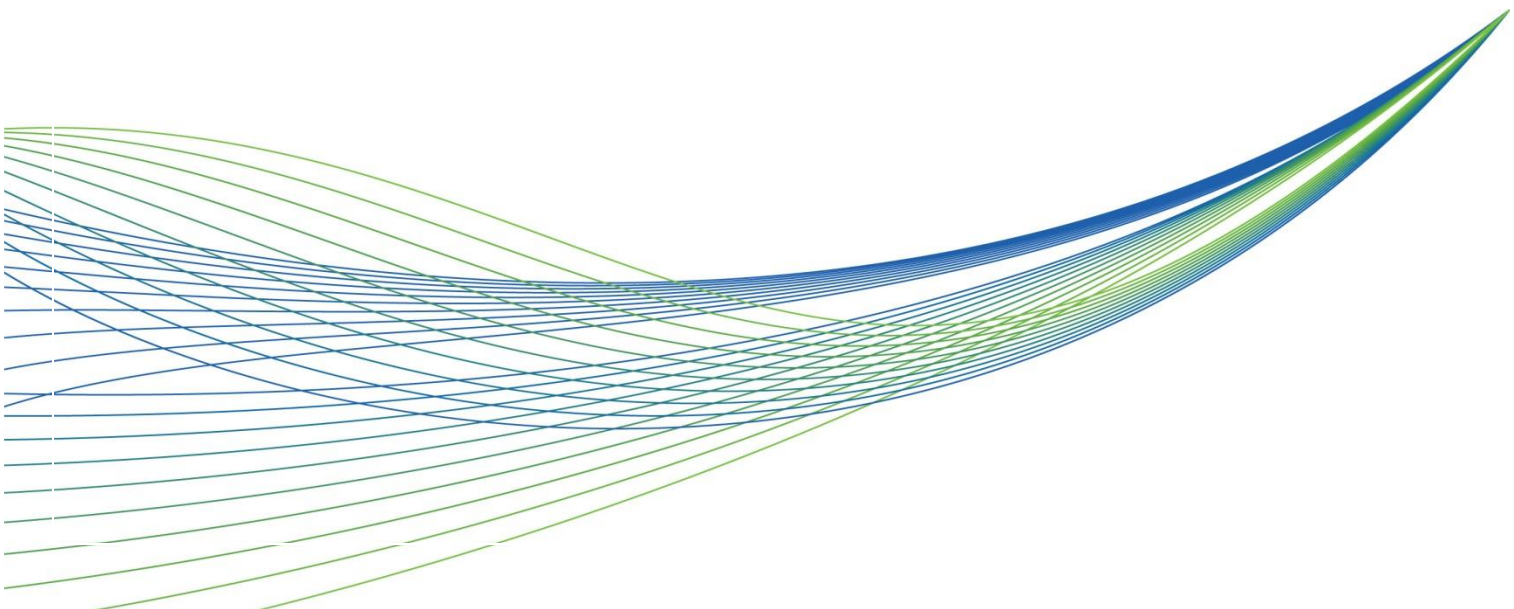
NHS RightCare

Bradford Healthy Hearts Resource Pack

January 2018



Healthy Hearts

- A Resource Pack

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NHS RightCare is about delivering the best care to patients, making the NHS's money go as far as possible and improving patient outcomes. It ensures that the right person has the right care, in the right place, at the right time, making the best use of available resources to help deliver a sustainable NHS.

Healthy Hearts

A Resource Pack

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1. About this resource pack

Resource packs are intended to support local health economies who think that these innovations can be adapted and adopted to support an improvement opportunity in their local area. They are not intended as guidance and it is up to the local community to ensure that the innovation is:

- suitable for the local population
- supported by appropriate governance
- evaluated to ensure that the innovation is having an impact.

The resources provided as part of the packs are an example of those used in a particular place and can be adapted, built on and improved to suit local circumstances.

2. Foreword

This case study tells an inspiring story.

In 2014 Bradford Districts Clinical Commissioning Group (CCG) had the seventh worst Cardio Vascular Disease (CVD) mortality rates in under 75s England. However, local clinical and public health professionals saw a major opportunity to improve outcomes by transforming treatment of the high-risk conditions for CVD, for example, high blood pressure, high cholesterol and atrial fibrillation.

Although each of these conditions are a major risk factor for heart attack and stroke, and although preventive treatments are highly effective at preventing cardiovascular events, late diagnosis and under-treatment is commonplace.

The results of the Bradford's Healthy Hearts programme demonstrate how over a very short period of time, 21,000 people had their treatment optimised and over 200 fewer people suffered heart attacks or strokes.

The key ingredients were strong clinical leadership with shared commitment across primary care, robust local intelligence to identify the gaps and opportunities in management, excellent communications with patients, public and professionals, and doing things differently with new models of care that minimised impact on GP workload.

This case study will be a very practical guide to clinical commissioning groups (CCGs) across England who wish to reduce premature death and disability from cardiovascular disease.

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3. Introduction

Bradford Healthy Hearts campaign was launched on February 14th 2015. In the first two years of operation, it significantly improved the health of its residents, helping 17,000 patients in the Bradford area, which in turn potentially prevented 211 heart attacks and strokes. Residents of Bradford Districts CCG's area are now more aware of what is needed for a healthy heart. More than 1000 more people with atrial fibrillation in the Bradford area are now on vital stroke preventive medicine which has reduced the risk of stroke by up to 74% in these patients[1]. In addition to these major health benefits, the CCG estimates it has made net savings of £1.2m[2] in the first 15 months of the programme. See appendix 2 for more details on outcomes.

The success of the programme in improving outcomes and reducing the number of heart attacks and strokes, individual and population health coupled with the simplicity of the approaches taken by the CCG have instigated the development of this resource pack.

Thank you to Bradford Districts CCG for sharing their experience and resources.

Their experience has led them to attaining the following awards and accolades:

- General Practice Awards 2015 – clinical team of the year (winner)
- General Practice Awards 2015 – general practice team of the year (winner)
- Association of Healthcare Communications and Marketing – best website (runner-up)
- BMJ Awards 2016 – clinical leadership team of the year (winner)

and being shortlisted for the following awards:

- HSJ awards 2015 – innovation
- HSJ Value in Healthcare Awards 2016 – use of IT to drive value in clinical services
- HSJ Clinical leader of the year 2016 – Dr Chris Harris.

[1] See appendix 1 for details of efficacy of preventative medication

[2] Cost of stroke = £11,000: 74*11000= £814,000. Cost of MI = £5,500: 137*5500= £753,500
Gross savings = £1,567,500. Net savings approximately £1,200,000 over first 15 months

4. Could a similar programme be right for your health economy?

The three-phase RightCare approach starts with 'Where to Look' - a review of indicative data to highlight the top priorities or opportunities for transformation and improvement.

The Commissioning for Value data[3] available on the NHS RightCare website provides your health economy with an ideal starting point for the 'Where to Look' stage. A bespoke 'Where to Look' pack is available for your CCG. This pack will help you start the process of judging which programmes of care are likely to offer the biggest opportunity to improve value and the relative merits of prioritising cardiovascular disease (CVD) against other programmes. The packs provide an indication of which programmes are likely to provide the greatest potential spend and outcome opportunities for your CCG. If CVD is one of these then there are many other resources available to help you identify, in more detail, what may need changing.

The NHS RightCare website contains the following resources:

- CVD focus pack[4] – this provides much more detail than the 'Where to Look' packs, giving breakdowns of admissions, procedures and drugs.
- Interactive outcome tool[5] – this allows freedom to explore all the focus pack data for every CCG in England.
- CVD Prevention pathway[6] – optimal value pathway for risk detection and management in primary care.

The cardiovascular disease (CVD) prevention pathway is an evidence-based resource developed in close collaboration with NHS England's National Clinical Directors, Public Health England, Royal Colleges, The National Institute for Health and Care Excellence (NICE) and other non-statutory stakeholders including patient

[3] The NHS RightCare intelligence products can be found on the NHS RightCare website https://www.england.nhs.uk/rightcare/products/ (information accessed 1 February 2018)

[4] The NHS RightCare CVD Focus Pack can be found on the NHS RightCare website https://www.england.nhs.uk/rightcare/products/ccg-data-packs/focus-packs/focus-packs-for-cvd-neurological-respiratory-maternity-april-2016/ (information accessed 1 February 2018)

[5] The NHS RightCare Interactive Outcome Tool can be found on the NHS RightCare website https://www.england.nhs.uk/resources/resources-for-ccgs/ccg-out-tool/ (information accessed 1 February 2018)

[6] NHS RightCare CVD Pathway can be found on the NHS RightCare website, https://www.england.nhs.uk/rightcare/wp-content/uploads/sites/40/2016/09/cvd-pathway.pdf (information accessed 1 February 2018)

groups. It aims to provide local health economies with:

- a high-level overarching national case for change;
- a best practice pathway for CVD prevention and associated high impact interventions; and
- best practice case studies for elements of the pathway what to change, how to change and a scale of improvement.

Public Health England offers a suite of resources through the National Cardiovascular Intelligence Network. A navigation tool providing easy links to all the available resources for CVD is available on the website of national archives[7].

This tool includes links to:

- cardiovascular disease profiles covering risk factors, kidney, diabetes, heart and stroke
- CVD Primary Care intelligence packs
- prevalence models for hypertension, diabetes, chronic kidney disease (CKD) and atrial fibrillation (AF)
- diabetes foot profiles.

Use this data to:

- undertake a diagnostic to cross-reference all of the main data sources, including: spend and outcomes, joint strategic needs assessment (JSNA) and local health and wellbeing plans
- triangulate the data to demonstrate assurance that this is a key area of opportunity to prioritise
- estimate your potential cost savings and outcomes improvements based on your own health economy's position.

5. About the Bradford's Healthy Hearts programme

In 2014 Bradford Districts CCG had the seventh worst CVD mortality rate for under 75s in England, with more than 700 deaths each year.

In response, Bradford Districts CCG set itself a challenging ambition to reduce cardiovascular events by 10% by 2020 – a reduction which will result in 150 fewer

[7] The navigation tool for CVD is available on the National Archives website http://webarchive.nationalarchives.gov.uk/20170302112655tf_/http://www.yhpho.org.uk/default.aspx?RID=182342 (information accessed 1 February 2018)

strokes and 340 fewer heart attacks. It made the commitment that *"We will no longer be the seventh worst CCG in the country!"*

Strong clinical leadership and widespread engagement resulted in the development of the CCG-led Bradford's Healthy Hearts programme (BHH), comprising of primary care-led solutions that are owned by practices together with a communications campaign to get the population talking about healthy hearts to help change behaviour.

The programme brings together local GP practices and the wider NHS with one overarching aim: to reduce the risk of stroke and heart attack.

The programme targets clinical conditions that share three important features: they significantly increase the risk of cardiovascular events such as heart attack and stroke; treatment is highly effective at preventing these cardiovascular events; and late diagnosis and suboptimal treatment is commonplace. The programme comprises:

- **vascular disease** – improved optimisation of blood pressure and cholesterol for those who already have vascular disease i.e. secondary prevention.

- **managing atrial fibrillation** (AF) (an abnormal heart rhythm that vastly increases the risk of stroke) – through anticoagulation.

- **cardiovascular risk reduction** – innovative approaches to the population with annual cardiovascular risk >10% risk over 10 years.

The first two years of the programme focus on the following three clinical workstreams that are the subject of this resource pack:

- **Lipids/statins**
  This workstream involved identifying groups of patients that could safely be offered statins at scale. Full details on page 18.

- **Atrial fibrillation**
  This workstream involved an automated batch risk scoring system to identify all patients with AF who had not been scored, and then several different prompts were used in the patient record to alert clinicians to any patients who were eligible for anticoagulation. Full details on page 25.

- **Hypertension**
  This workstream involved two parts: finding undiagnosed patients and

optimising treatment. Full details on page 33.

The overall outcomes from the BHH programme involved over 17,000 patient treatment interventions over 15 months, with 211 fewer myocardial infarctions (MIs) and strokes seen in that time, and a net saving of around £1.2million. The programme continues with the hypertension work streams, and BHH is now starting to review potential work streams for heart failure.

See appendix 2 for more details on the outcomes of these treatment interventions and calculations.

6. Key success factors

Bradford Districts CCG attribute its success to the following factors:

Local leadership

- widespread ownership of the problem amongst CCG/practices/patients with the collective agreement that '*it is our problem*'
- strong and visible clinical leadership, at CCG-wide level and within each practice
- wide-ranging engagement with a broad range of healthcare stakeholders, including hospital consultants, so GPs and consultants were working together
- clinical involvement from the very start of the development of each workstream and guidelines, taking the approach "if they write 'em, they will use 'em!"
- flexibility – an acknowledgement that not everything you try will work
- passion, enthusiasm and momentum

Doing things differently

- solutions that are primary care-led and owned by practices
- working at scale across all 40 GP practices – developing as many things (clinical searches for example) on a grand scale therefore reducing the impact on clinical time
- ensuring solutions are workload-light for busy clinicians – making it easy for everyone. If it's too hard they won't do it.
- CCG-wide protocols agreed with secondary care
- taking a proactive approach to engage and communicate with patients, using a wide range of channels and approaches
- proactive patient education programme.

Clarity of vision

- relentless focus on the size of the prize i.e. preventing hundreds of strokes and heart attacks – it's not always offering financial reward – identifying opportunities for improved outcomes is a better incentive to ensure clinical buy in
- founding the programme on 'achievable benchmarks of care' with an overriding commitment to reduce unwarranted variation
- giving the programme a strong sense of identity under the banner of Bradford's Healthy Hearts and bringing all parts of the programme together under the overarching BHH website.

7. Planning and project management

The programme was supported by the CCG senior team with strong clinical leadership. Consisting of clinical board members and governing body,

For each of the workstreams within the overall programme, a clear project plan was produced, with timescales and targets of achievement. This method ensured that primary care teams were aware of the level of input required.

A dedicated Programme Board had overall responsibility to drive the programme forward and achieve and deliver benefits and the strategic objective of the programme. Membership and roles of this Board are shown in appendix 3.

Once commitment had been gained for the programme, there was commitment to weekly, then fortnightly and then monthly steering group meetings to set the pace, develop momentum and embed practice throughout the CCG, member practices and partners.

An example project plan is available in the supporting file pack.
An example reporting template is available as appendix 3.

To meet governance requirements, CCG's may wish to undertake an impact assessment, and decide how they will manage risk and benefit registers.

8. Clinical leadership and engagement

A fundamental success factor was the strong clinical leadership shown by the CCG. To mirror Bradford's[8] achievements, you may wish to consider the following actions:

[8] Please note that within this resource pack, Bradford refers to Bradford Districts CCG.

Clinical leadership and engagement success factors	
 	Strong and visible leadership that needs to start at the top with commitment and enthusiasm from the CCG governing body, council of representatives and clinical board. Which clinicians will lead the process and make a very visible commitment to its success? How will you gain the commitment and support from internal and external stakeholders and then make it visible to drive and maintain momentum for the programme?
 	Take the time to communicate and inspire. How will your clinical leads find, and take, the time to engage with GP colleagues via CCG-wide and practice meetings, as well as with other stakeholders? Gain commitment from your GP body as a priority to get practices on board and inspired. This momentum can then help drive the programme via their practice staff, patient participation groups and other local stakeholders. How will you support this engagement process? Can you provide a template presentation, FAQs, video and other communications for use within individual practices (see section 10 on communications and engagement).
 	Widespread stakeholder involvement of both primary and secondary care, pharmacists, voluntary sector, local authority and patients - giving a clear message that the programme is not just about GPs. Are communications and engagement colleagues an integral part of the programme team? Do you have a communications and engagement plan for the programme that clearly identifies the key stakeholders, objectives and how their needs will be met?
 	Identifying local clinicians with strong links to secondary care who are credible, personable and with high levels of clinical knowledge and a particular interest in CVD. Do you already know who these clinicians are or do you need to find out?

Clinical leadership and engagement success factors	
 	Early secondary care engagement – developing a unified message across primary and secondary care taking a population approach. This consistent approach ensures that patients are receiving the same messages across the pathway. Are there joint meetings that you could use to engage? If not, what opportunities could you create via medical staffing, post graduate education or clinical governance departments?
 	Co-design of programme guidelines by primary and secondary care clinicians. *BHH undertook this work as part of the clinical education sessions. Both secondary care and primary care clinical colleagues worked collaboratively, challenging practice to agree the guidelines and gain ownership and engagement.* How will you gain the commitment from secondary care and identify joint opportunities to co-design guidelines?
 	Developing clinical leadership across the system in primary and secondary care by identifying a lead clinician/clinical champion in each GP practice (whether this is a GP, practice nurse, pharmacist). *These lead clinicians have acted as Bradford's Healthy Hearts champions and have been a significant part of the success. Their detailed understanding of the programme (via education events – see below) has enabled them to inspire and train their practice colleagues and ensure local drive and momentum.* *In BHH, each practice was asked to commit to the BHH programme and signed to confirm their agreement. Funding (£5,000 per practice for the first 12 months) was based on attendance at the education sessions and signatures were needed by the clinical champion unless otherwise agreed by the CCG. The agreement with champions is available within the supporting file pack, the funds release letter.* *Practices were asked to nominate a clinical champion within their practice who would participate in each of the education sessions, drive implementation back in practice and be the responsible change maker feeding back to both the education sessions on their progress, and also back in practice to other colleagues.* Will you develop and agree a role description? How will you identify your clinical champions?

Clinical leadership and engagement success factors	
	Will you ask for volunteers or nominations? How will you select them if you have more volunteers than you need or will there be no limit? Will you reimburse them and if not, what incentive will you use to recruit them to the role?
 	Regular educational and progress meetings *In Bradford, nominated clinical champions have attended regular engagement events organised by the CCG. These events have provided updates on the programme and provided training to improve skills.* *You can see the programme and slide sets for these sessions on the Bradford Healthy Hearts' website at* http://www.bradfordshealthyhearts.co.uk/professionals *Supporting CVD 'CRAFT' cards were provided to clinical staff. These are available from* Et al training[9]. The *CRAFT cards are 6x4 laminated cards which have a ring in the corner so they can be easily used, They include resource information on units of alcohol, lipid management, DVT, wells score, HTN therapy* Who would organise similar engagement events? Can you use existing meetings such as Protected Learning Time sessions or equivalent? Can you create a forward plan of events? Could you modify the BHH education event slides for use at education sessions?
 	Involvement of practice staff in solution finding *Via the clinical champions, practice staff were involved in finding solutions to issues that have arisen during the project. This engendered local ownership and interest in the project. This was achieved via practice meetings, with standing agenda items at practice meetings, as well as by putting on dedicated education sessions for other clinical staff such as practice nurses.* How will you create opportunities to gain feedback and ideas from

[9] Information on the training can be found on the Et Al website http://etaltraining.co.uk/ (information accessed on 1 February 2018)

Clinical leadership and engagement success factors	
	practice staff? Will this be via the clinical champions or via additional mechanisms? How can you encourage two-way communication about the programme?
 	Working with the strategic clinical network and Academic Health Science Network (AHSN). Check in with your local strategic clinical network and AHSN[10] as they are likely to have regional CVD programmes.
 	A commitment to making the work required of GPs as workload-light as possible. This includes consideration of: • data sharing to ensure patient safety and avoid duplication of effort. (Within BHH, data was shared with the CCG in anonymised form only). • IT interventions – patient searches were streamlined into 'work to do' rather than overloading practices with searches; alerts appeared in strategic places with easy access information to explain risk to patients including the use of pop-up boxes); monthly dashboard; comparative performance. • Do you need to have local data sharing agreements in place?
 	Ensuring consistency and focus – a commitment to identifying a few measures that you know will have an impact, run repeatedly and then stopped. *See later sections of this resource pack for the measures that Bradford selected and what they did.* What measures will you select and what will be the easiest way to collect the data? How do the measures link with your NHS RightCare Delivery plan.

[10] Details of all England's AHSNs can be found on the AHSN Network website http://www.ahsnnetwork.com/ (information accessed 1 February 2018)

Clinical leadership and engagement success factors	
	Measure and monitor so you know how the programme is going and you can feedback to practices. Make sure the data tells the story – make it challenging, fun, hard work and outcome based. *Regular feedback to practices via reporting and discussions led by the practice Healthy Hearts clinical champion has been critical to the success of the Bradford programme. A monthly dashboard (see appendix 3) was developed that showed practice and comparative performance that made targets very clear and initiated competition between practices. The central resource at the CCG and the fact that all practices used the same GP system (SystmOne) facilitated this process. This tactic proved successful and led to lively discussion at practice meetings.*
	How could you develop local dashboards to provide practice feedback?
	Bradford awarded a range of prizes to reward achievements of quality and outcomes framework (QOF) targets relevant to the programme. Practices received plaques for first, second and third prizes and competition prizes
	What incentives could you use? Remember it's not always about offering financial reward – acknowledgement of success shown by comparative data can be a better incentive.
	Demonstrate support to primary care at CCG level *In Bradford, this was achieved in a number of ways including, listening to practices and acting on their feedback, prizes and award nominations (leading to several noticeable successes).* *The programme has helped bring the membership of the CCG together which has had a positive impact on other areas of the CCG's work. Raising the profile of the CCG nationally via national awards and publicity has improved morale.*
	How can you acknowledge and celebrate commitment success?

Clinical leadership and engagement success factors	
	**Patient engagement success factors** Involve patients in the co-production of information and hold patient education sessions *In Bradford, patients were involved in co-designing patient letters and the website. Well-attended monthly patient education sessions are held in different parts of the district, to which practices invite their patients by text message (see later sections).*
	Do you have existing patient groups that you could use to help develop information?

9. Clinical work streams

Each clinical element of the programme followed a similar redesign process as shown in the table below. This process enabled all those involved to address the following key questions:

- What's the target outcome?
- How can we be smart about this?
- Do we need to amend local clinical guidelines to achieve this?

The following work streams of the Bradford's Healthy Hearts programme are described in the tables below:

- lipids/statins
- atrial fibrillation
- hypertension.

9.1 Lipids/statins workstream

This workstream of the BHH programme involved:

- identifying groups of patients that could safely be offered statin at scale.
- first was a statin switch: patients currently taking simvastatin with a cholesterol of >4 were sent letters advising them of the switch to atorvastatin (recommended by NICE as being more effective at reducing cholesterol).
- secondly, patients with a QRISK2 score of over 10% were sent a letter and prescription through the post requesting that they start taking new statin medication (or an invitation to change at their next repeat prescription).

QRISK2 is a prediction algorithm for CVD that uses traditional risk factors (age, systolic blood pressure, smoking status and ratio of total serum cholesterol to high-density lipoprotein cholesterol) together with body mass index, ethnicity, measures of deprivation, family history, chronic kidney disease, rheumatoid arthritis, atrial fibrillation, diabetes mellitus, and antihypertensive treatment

In three to four months, 6,000 statin switches were made and 7,000 patients were started on new statins. The statin switches intervention resulted in a reduction of 0.56 mmol/l in LDL-C, and the Qrisk work in a reduction of 0.39 mmol/l[11]. For both of these LDL reduction, the p values were statistically significant at <0.001. The predicted benefits of this are substantial as for every 1mmol/l reduction in LDL cholesterol reduces risk of a cardiovascular event such as stroke and heart attack by 25% every year (Collins, R. et al, 2016)[12]. A total of 13,000 patients had their medication changed.

[11] Calculated from a subsection of the total for whom data was available (some 2,000)

[12] Collins, R. et al, The Lancet, November 19, 2016: 388: 2532–61 Published Online September 8, 2016 Interpretation of the evidence for the efficacy and safety of statin therapy. This article can be found on the Lancet website http://www.thelancet.com/pdfs/journals/lancet/PIIS0140-6736(16)31357-5.pdf (information accessed 1 February 2018)

Key steps in the improvement process	Comments	Resources[13]
Identify the problem and be clear about the opportunity	• Meet and exceed NICE guidelines by ensuring that all suitable patients were offered the most appropriate statin medication.	NICE guidance on CVD: risk assessment and reduction, including lipid modification[14]
Set targets for improvement	• Set targets that are achievable and meaningful. This will make them much easier to communicate and have resonance with practice staff. *Bradford set the target of 77% of patients with a QRISK2 score greater than 20% being on the agreed statin medication within five months. There was broad consensus amongst Bradford Districts CCG that they wanted to go beyond the NICE guidance.* • Identify measures that will demonstrate the desired outcomes. This should align with the measurement framework developed within your NHS RightCare evaluation plan. • Benchmark (by practice if possible) so you know where you are now and how each practice is performing.	

[13] Resources will be made available via a hyperlink wherever possible or in a file pack available by emailing rightcare@nhs.net CCGs need to evaluate the quality of this material and its suitability for their own use.

[14] NICE guidance on CVD: risk assessment and reduction, including lipid modification can be found on the NICE website, https://www.nice.org.uk/guidance/cg181 (information accessed 1 February 2018)

Key steps in the improvement process	Comments	Resources[13]
Identify the target population ensuring an achievable number	• Make sure you decide on a manageable cohort of patients for the new intervention. There will be two groups: - those who are currently eligible due to an active diagnosis or treatment regime - those who are currently undiagnosed and therefore not easily identifiable as being in need • Make a start on those who you already know about. • Use the new NICE guidance on QRISK2[15] to identify the proportion of your population at risk of CVD and from there, the number of people who need a risk assessment . • In this workstream, BHH identified two cohorts who were offered different solutions: 1.Patients currently taking simvastatin with a cholesterol of >4 (offered statin switch to atorvastatin). 2.Patients with a QRISK2 score of over 10% (to be offered statin medication).	
	• Use a data query to GP computer systems to identify the target list of patients. (A data query takes 1-2 minutes)	Data queries are available in the accompanying file pack on request

[15] QRISK2 guidance can be found on the QRISK website, https://www.qrisk.org/ (information accessed 1 February 2018)

Key steps in the improvement process	Comments	Resources[13]
Define the new clinical management protocol	• Agree a simplified protocol with secondary care, aimed at reduced primary care workload.	NHS RightCare CVD optimal value pathway[16]
Protocol	• Patients on **simvastatin** with total cholesterol above 4 mmol/l or LDL >2 mmol/l to be switched to **atorvastatin** 40mg (primary prevention)/80mg (secondary prevention). • Patients with a QRISK2 score of over 10% to be offered statin medication • Exclusions included those who had previously been prescribed atorvastatin, those on warfarin, above the age of 85, or who were palliative or in nursing homes.	BHH Evidence review for statins[17] BHH Lipids guide[18] BHH Lipids Frequently Asked Questions[19]
Implement the	• GP practices send letter out to all patients in the target groups along with a	Available in the file pack:

[16] NHS RightCare CVD Pathway can be found on the NHS RightCare website, https://www.england.nhs.uk/rightcare/wp-content/uploads/sites/40/2016/09/cvd-pathway.pdf (information accessed 1 February 2018)

[17] Bradford Healthy Hearts' evidence review for statins can be found on the Bradford Healthy Hearts website, http://www.bradfordshealthyhearts.co.uk/media/pdf/Evidence%20review%20for%20statins.pdf (information accessed 1 February 2018)

[18] Bradford Healthy Hearts' lipid guide can be found on the Bradford Healthy Hearts website, http://www.bradfordshealthyhearts.co.uk/media/pdf/BHH%20simple%20lipids%20guide.pdf (information accessed 1 February 2018)

[19] Bradford Healthy Hearts' Frequently Asked Questions can be found on the Bradford Healthy Hearts website ,http://www.bradfordshealthyhearts.co.uk/media/pdf/Lipids%20FAQ%20revised%20v1.2.pdf (information accessed 1 February 2018)

Key steps in the improvement process	Comments	Resources[13]
intervention in line with the protocol	prescription (or invitation to change at their next repeat prescription) for the revised or first time statin using a bulk switch repeat template. (Practices to decide to either send prescription or to ask patients to change on repeat based on their detailed knowledge of their practice population.) • Back up letter with wide ranging communications campaign (see section 10 for section on communications). • Widespread communication to all GP practices and community pharmacists to support patients' queries regarding their new medication. • Use website as a resource to explain further, particularly through the use of videos and other information. • Patients' record flagged to indicate they are part of the statin workstream via a code in the patient's notes. • Practices change the patient's repeat prescription. *In BHH, production of the letter and prescription using a bulk switch repeat template took minutes. If this had been done in the traditional face-to-face way, the CCG estimated it would have taken approximately an extra 24,000-36,000 appointments across the CCG.*	Patient letters used by BHH Bulk repeat template for SystmOne, Vision and EMIS Template to flag patients' records for SystmOne, Vision and EMIS
Measure outcomes	• QRISK2 (10-20 and >20%): Measure the number of patients that took up the offer of the statin. • Provide data by practice to compare with the benchmark and to act as incentives for further improvement (see appendix 3). • *Bradford's preliminary figures showed around 70-80% uptake but follow-up figures are being compiled currently to assess longer term adherence.*	
Supporting communications	• Use practice clinical leads to cascade information from the education sessions and enlist support/educate practice team about the lipids	Patient letters in file pack

Key steps in the improvement process	Comments	Resources[13]
and engagement	programme. • Involve patients in the design of letters and website. • Work at scale with letters sent to patients rather than face-to-face consultations. • Support with website, YouTube channel, wide ranging communications package, involvement of patient participation groups and patient education programmes (see below). • Involve other professionals who will come into contact with patients affected by the programme, including GP reception staff. Of particular note is community pharmacists who will see patients when they pick up their new medication. Involve your community pharmacy lead and enlist their support to help inform and involve their community pharmacy colleagues.	Bradford Healthy Hearts' website[20] (see appendix 5) Example of video[21] made by BHH where the chief executive of Community Pharmacy West Yorkshire is talking to pharmacists about Bradford's Healthy Hearts campaign and statins prescribing
Sustainability	A principal aim of the clinical champion program is long term behaviour change and upskilling the workforce. Previous quality improvement programs have all shown transient improvements which then regress with time, whereas the BHH program has continued to build on previous achievements even after the workstreams are concluded. For instance, many practices run a search every month for those with Qrisk >10% and not on a statin and send them all the standard BHH statin letter and a prescription via an automated protocol. This	

[20] Bradford Healthy Hearts website, http://www.bradfordshealthyhearts.co.uk/ (information accessed 1 February 2018)

[21] Example of video can be found on the Bradford Healthy Hearts website, http://www.bradfordshealthyhearts.co.uk/professionals (information accessed 1 February 2018)

Key steps in the improvement process	Comments	Resources[13]
	saves on nursing and GP time.	
Clinical safeguards	For the statin switch workstreams, clinical safeguards included a wide range of exclusion criteria, such as numerous concurrent medications (any anticoagulants [including prescribed by third party in the past], antifungals, macrolides, immunosuppressants, fibrates, anti-TB meds, HIV meds, diltiazem, digoxin, etc), anyone with a previous prescription for atorvastatin (regardless whether coded as intolerant/adverse reaction), coded as statin declined in last 12 months, LFTs not done prior, latest ALT>120, no recent BMI or BMI <18, HIV, TB, any transplant, previous haemorrhagic stroke, or on palliative care register, For Qrisk work, in addition to the above list, BHH also excluded anyone who had taken any statin in the past, and any on the CVD register. Since these Qrisk patients had not taken a statin before, they were advised to see their GP if any problems/concerns. All patients were directed to the website which had a lot of information about common questions about CVD, statins and cardiovascular risk. Community pharmacists were involved in the communications campaign so were available to act as a source of information and support to patients.	

9.2 Atrial fibrillation workstream – stroke prevention

Atrial fibrillation (AF) increases the risk of stroke, reduces quality of life, and increases morbidity and mortality. A significant number of patients who have AF are asymptomatic, which often leads to a delay in diagnosis. Too often, AF is only detected when the patient presents with serious complications, such as a stroke. Anticoagulation reduces the risk of stroke, but data has shown that only around half of patients eligible for an anticoagulant actually receive one (Cowan, C.et al. 2013).[22]

This workstream involved:

- An automated batch risk scoring system to identify all patients with AF who had not been scored. Several different prompts were used in the patient record to alert clinicians to any patient with a CHADSVASc score ≥1 who was eligible for anticoagulation.
- personalised advice was then provided to patients, according to their risk scores.
- monthly CCG-wide education sessions were provided to patients.
- specialist clinics being held at most practices in the CCG with a GPwSI reviewing cases, and all patients provided with in depth education sessions.
- The worksteam resulted in >1000 new high risk patients being anticoagulated which reduced their risk of stroke by up to 74%[23]. Furthermore, following delivery of the BHH AF workstream, Bradford has the highest percentage of AF patients on anticoagulation across Yorkshire and Humber.

[22] Cowan C, Healicon R, Robson I, Long WR, Barrett J, Fay M et al. 2013 The use of anticoagulants in the management of atrial fibrillation among general practices in England. *Heart (British Cardiac Society)* **3**; 99(16). pp.1166-1172. The article is available on the US National Library of Medicine/National Institute of Health website, https://www.ncbi.nlm.nih.gov/pubmed/23393083 (Information accessed 1 February 2018)

[23] See appendix 1 for evidence base

Key steps in the improvement process	Comments	Resources[24]
Identify the problem and be clear about the opportunity	Information relating to the clinical case for change was provided to GPs at one of the clinical champion education events.	Bradford Healthy Hearts' December 2014 education event slides[25]
Set targets for improvement	• *Bradford aimed to: anticoagulate a minimum of 85% of patients who had a CHADVAS2 score equal to or greater than one, within 12 months.* • *All practices were benchmarked against the 85% target* • Identify measures that will demonstrate the desired outcomes. This should align with the measurement framework developed within your NHS RightCare Delivery plan. • Benchmark (by practice if possible) so you know where you are now and how each practice is performing.	
Identify the target population	• *To achieve the BHH target, this workstream involved all patients who had a CHADVAS2 score equal to or greater than one, identified via an automated template within the GP system.*	Data query for Systm One, Vision and EIMIS in file pack

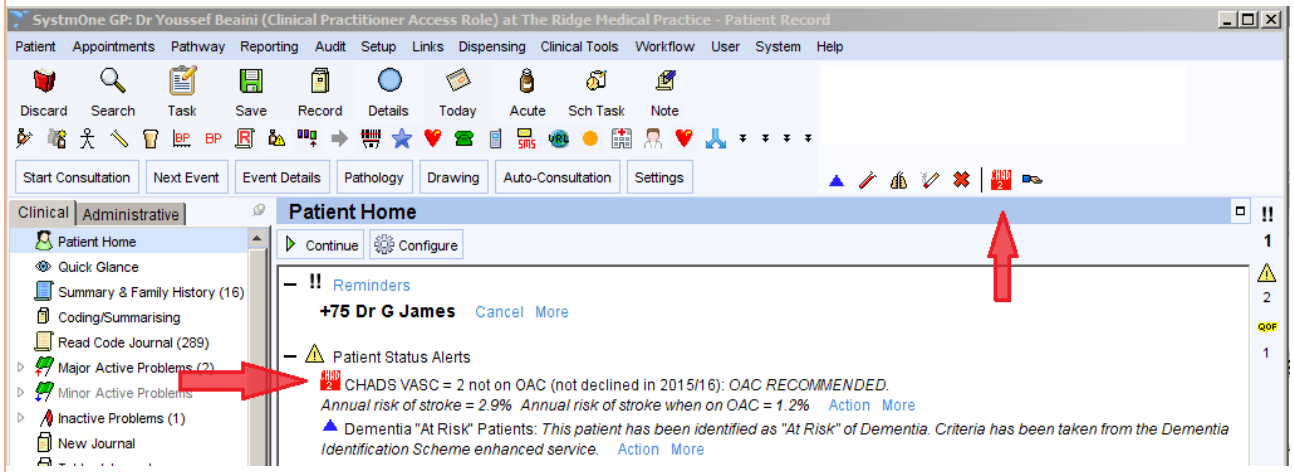
[24] Resources will be made available via a hyperlink wherever possible or in a file pack available by emailing rightcare@nhs.net

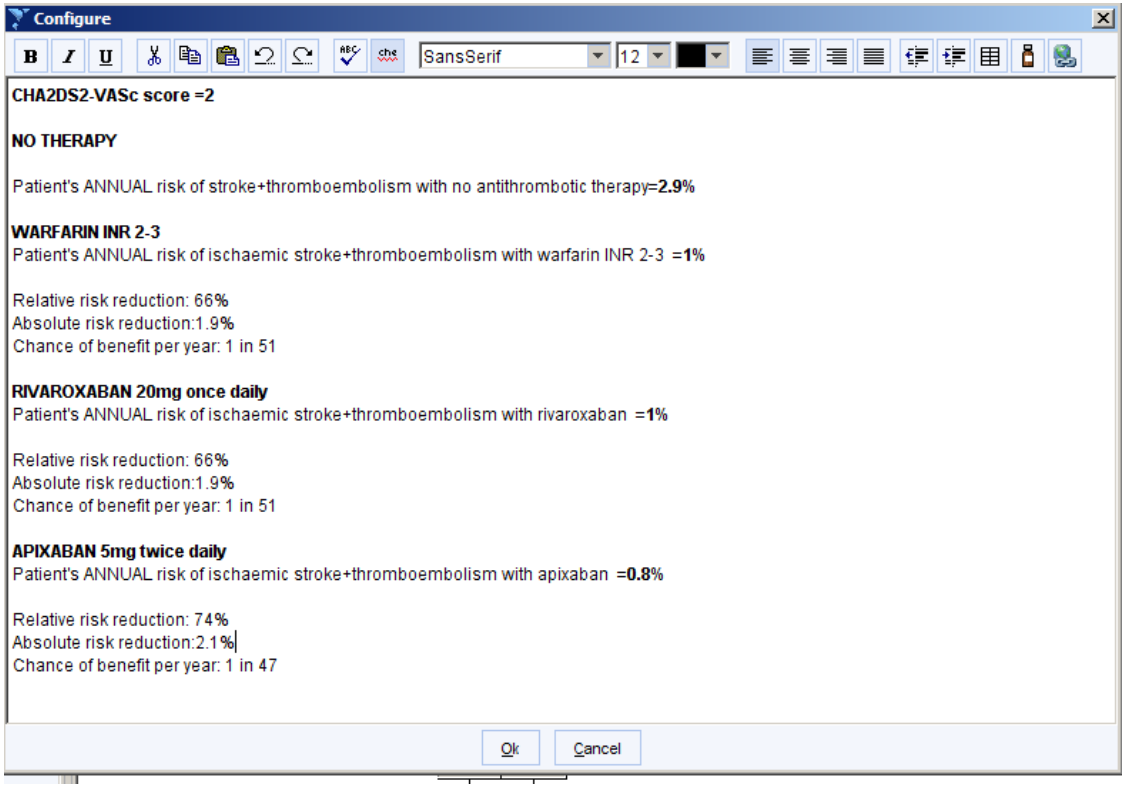
[25] The December 2014 education event slides can be found on the Bradford Healthy Hearts website, http://www.bradfordshealthyhearts.co.uk/media/pdf/events/Education%20event%20Dec%202014.pdf (information accessed 1 February 2018)

Key steps in the improvement process	Comments	Resources[24]
Define the new clinical management protocol	• Patients with a CHADSVASc score ≥1 to be offered anticoagulant therapy (OAC). • Women under the age of 65 with no other risk factors were excluded.	NHS RightCare CVD optimal value pathway[26] BHH top tips for AF and NOACs[27]
Implement the intervention in line with the protocol	• Run automated batch risk scoring system to identify all patients needing a score and then automatically add the score to the medical record. • Using SysmOne install templates on the GP system that create several different prompts in the patient record to alert clinicians to any patient with a CHADSVASc score ≥1 who was eligible for anticoagulation. Icon alerts in the patient record gave the CHADSVASc score, stroke risk and also stroke reduction that would be gained by OAC (see screenshot below).	Data query for SystmOne, Vision and EMIS in file pack

[26] NHS RightCare CVD Pathway can be found on the NHS RightCare website, https://www.england.nhs.uk/rightcare/wp-content/uploads/sites/40/2016/09/cvd-pathway.pdf (information accessed 1 February 2018)

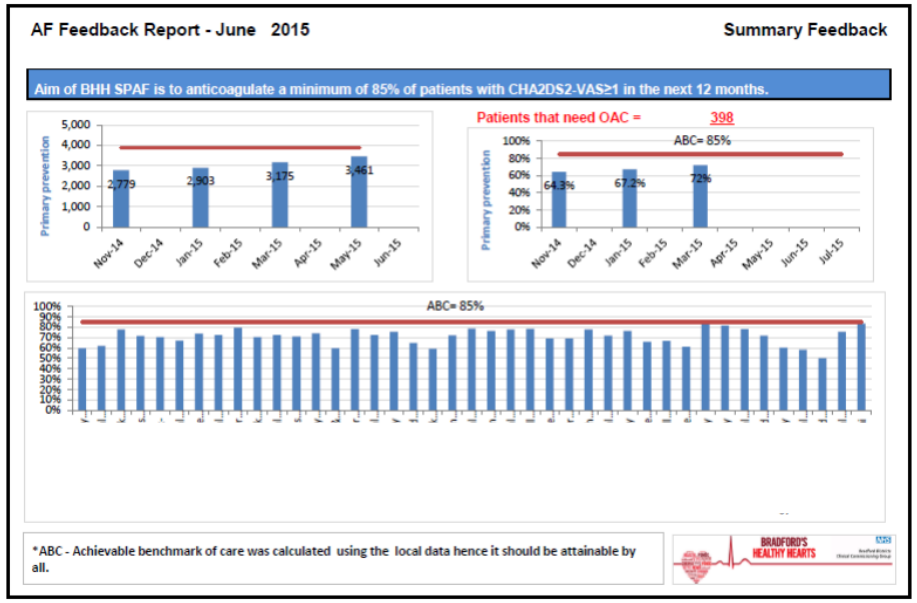
[27] Bradford Healthy Hearts' top tips for AF and NOACs can be found on the Healthy Hearts website, http://www.bradfordshealthyhearts.co.uk/media/pdf/Top%20tips%20AF%20and%20NOAC%20tips.pdf (information accessed 1 February 2018)

Key steps in the improvement process	Comments	Resources[24]
	 • The template also provides a summary of OAC treatment options personalised for the patient's CHADVASc score (see below for screenshot)	

Key steps in the improvement process	Comments	Resources[24]
	 • Depending on decision of the practice, bring patients on the target list in proactively for an appointment or discuss OAC when attend for appointment and see flag in their record.	

Key steps in the improvement process	Comments	Resources[24]
	• Encourage a balanced discussion of risks with the patient in line with NICE guidance based on CHADSVASc score vs bleeding risks from HASBLED score. The HASBLED score can be calculated from the TPP protocol in SystmOne, or using the BHH template. For NICE Guidance on the management of AF click here[28] *In Bradford, specialist clinics were held at most practices in the CCG with a GP with special interest reviewing cases.*	
Measure outcomes	• Benchmark progress and feedback to practices via practice CVD clinical champions. • See example feedback chart below in appendix 3.	

[28] NICE Guidance on the management of AF can be found on the NICE website, https://www.nice.org.uk/guidance/cg180/chapter/key-priorities-for-implementation (Information accessed 1 February 2018)

Key steps in the improvement process	Comments	Resources[24]
		
Supporting communications and engagement	• Educate CVD champions via education programme who can then cascade to practice colleagues. *BHH introduced the Stroke Prevention in Atrial Fibrillation SPAF championship. An iPad was awarded to the clinical champions and practice team that achieved the highest improvement measured as a proportion of patients on OAC/AF register x*	See BHH YouTube channel[29] for examples of videos developed

[29] Bradford Healthy Hearts YouTube channel can be found on the YouTube website, https://www.youtube.com/channel/UCTdzLbvFWDC_1MAeq-maMYg (information accessed 1 February 2018)

Key steps in the improvement process	Comments	Resources[24]
	1000. • Use video to help communicate to a range of audiences – it can be a simple talking head.	
Education Programme	• Consider offering large scale open access patient education programme on all aspects of CVD to patients. *In addition, in BHH, APODI were commissioned to provide training to all patients who were already taking anticoagulants. This training by APODI specialist nurses aimed to ensure patients understood why they were taking their medication and how to take it correctly. Practice staff were also welcome to attend these sessions.*	

9.3 Hypertension workstream

This workstream of the programme involved two parts: finding undiagnosed patients and optimising treatment.

For the prevalence arm:

- searches were used to identify patients who were at risk of having hypertension but not yet diagnosed, so that they could be offered investigations
- a second set of searches identified those who were on antihypertensive medication but not coded as hypertensive, and not coded with any other relevant CVD diagnoses.

For the treatment arm of this workstream, a much-simplified treatment algorithm was designed.

- a series of searches was used to identify patients whose blood pressure was above target who were then offered medication, based on based on locally developed protocols.
- education sessions were offered to newly diagnosed patients in self-management and monitoring
- a comprehensive blood pressure communications campaign raised public awareness of the need to monitor blood pressure, encouraging the public to manage risk factors, know their own numbers and seek help when needed.

The aim was to increase optimal BP control (<140/90) from 63 to 76% of those with known hypertension and not controlled to <140/90. The predicted benefits of this are substantial as every 10mmHg reduction in systolic blood pressure reduces risk of cardiovascular events by around 20% (Ettehad, D. et al. 2016)[30].

After one year of BHH's two-year hypertension treatment programme, they have achieved their target of 76% controlled (with 75.7% now controlled to <140/90) This equates to just under 4700 more patients with BP controlled to <140/90. BHH plan to raise the target further for the second year of the programme to 80%.

[30] Ettehad, D. et al. 2016. Blood pressure lowering for prevention of cardiovascular disease and death: a systematic review and meta-analysis. *The Lancet*. 387 (10022), pp.957 – 967. The article can be found on The Lancet website, http://www.thelancet.com/journals/lancet/article/PIIS0140-6736(15)01225-8/abstract (information accessed 1 February 2018)

Key steps in the improvement process	Comments	Resources[31]
Set targets for improvement	BHH committed to increase optimal BP control to a minimum of 76% of patients in the next two years. • Identify measures that will demonstrate the desired outcomes. This should align with the measurement framework developed within your NHS RightCare Delivery plan. • Benchmark (by practice if possible) so you know where you are now and how each practice is performing.	
Identify the target population	**To address prevalence,** in BHH, two patient groups were identified: • patients who were on antihypertensive medications but not coded as hypertensive, and not coded with any other relevant CVD diagnoses. • patients who were at risk of having hypertension but not yet diagnosed, so they could be offered investigations (4 or more readings >140/90 and where the last reading is still above >140/90). **For treatment:** • patients with high BP on only one drug - either amlodipine, indapamide, or Ramipril.	

[31] Resources will be made available via a hyperlink wherever possible or in a file pack available by emailing rightcare@nhs.net

Key steps in the improvement process	Comments	Resources[31]
Define the new clinical management protocol	• Active review of patients (eg SBP>180) or opportunistically review patients with raised BP (patients alert will stay active). • Introduction of a second drug –amlodipine or indapamide based on a simplified hypertension protocol showing the four steps to be taken in the drug management.[32]	NHS RightCare CVD optimal value pathway[33]

[32] The BHH simplified hypertension treatment algorithm was based on the principle from ESC 2013 hypertension guidelines

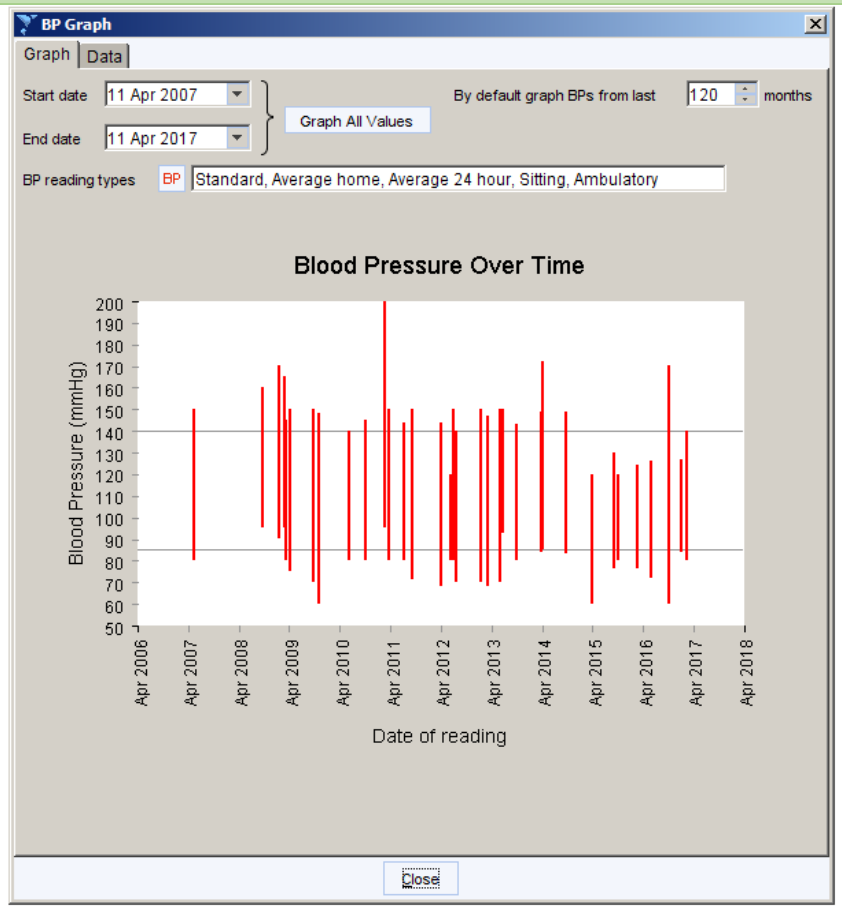
Mancia, G. et al, 2013 ESH/ESC Guidelines for the management of arterial hypertension: The Task Force for the management of arterial hypertension of the European Society of Hypertension (ESH) and of the European Society of Cardiology (ESC). *European Heart Journal.* **34** (28), pp. 2159–2219 The guidlelines can be found on the Oxford Academic website, https://academic.oup.com/eurheartj/article/34/28/2159/451304 (information accessed 1 February 2018)

> "*Although meta-analyses occasionally appear claiming superiority of one class of agents over another for some outcomes,* [391 – 393] *this largely depends on the selection bias of trials and the largest meta-analyses available do not show clinically relevant differences between drug classes* (ESC, 2013)

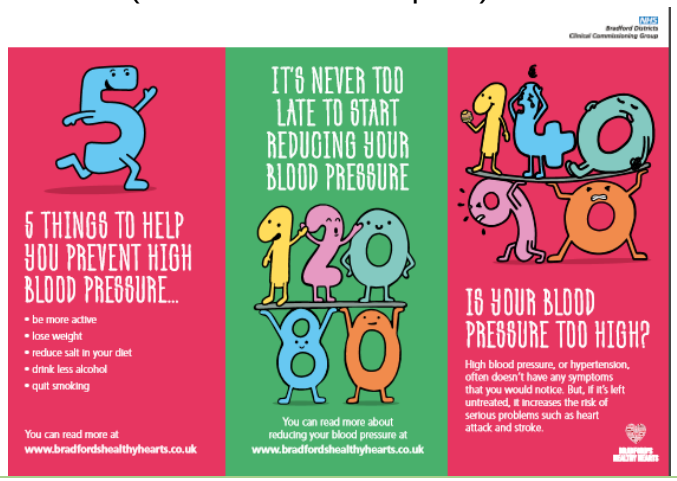
BHH therefore use first line CCB (amlodipine), second line thiazide-like (indapamide), third line ARB (since ACEi has 15% cough and adherence is a major problem in hypertension), and then fourth line spironolactone (based on increasing body of evidence for spironolactone in resistant hypertension (e.g. Williams, B. et al 2015 Spironolactone versus placebo, bisoprolol, and doxazosin to determine the optimal treatment for drug-resistant hypertension (PATHWAY-2): a randomised, double-blind, crossover trial. Pathway-2 in The Lancet. **386** (28), pp.2019-2116. This article can be found on The Lancet website, http://thelancet.com/journals/lancet/article/PIIS0140-6736(15)00257-3/abstract (information accessed 1 February 2018)

[33] NHS RightCare CVD Pathway can be found on the NHS RightCare website, https://www.england.nhs.uk/rightcare/wp-content/uploads/sites/40/2016/09/cvd-pathway.pdf (information accessed 1 February 2018)

Key steps in the improvement process	Comments	Resources[31]
Implement the intervention in line with the protocol	• Run automated query to identify and flag currently undiagnosed patients. *In Bradford, this resulted in about 1% increase in prevalence completed over around 1-2 months, amounting to around 1000 people.* • Set up template to provide an alert to the GP that the patient is a possible hypertensive patient and a prompt to the GP to consider investigating for hypertension. The BHH searches identified patients whose BP was above target, and these were subdivided into smaller groups by BP level. Clinicians could then first urgently focus on those with very high BPs, such as >180 systolic, and even more urgently on those with BP >200 systolic Patient alerts also prompted clinicians that BP was not controlled. • Run a series of searches to identify patients with high BP on only one drug (amlodipine, indapamide, or Ramipril) with a view to the addition of addition of a second drug (amlodipine or indapamide). • Make therapy changes at face-to-face consultation. Complete data record or code as appropriate. Each patient's results were displayed graphically as below.	Data queries for SystmOne, Vision and EMIS in file pack

Key steps in the improvement process	Comments	Resources[31]
	 BHH found this kind of graph to be useful when assessing if a patient had previously been diagnosed with hypertension or not. These patients	

Key steps in the improvement process	Comments	Resources[31]
	had been started on antihypertensive treatment, usually 10 or more years ago, and were still on this. Prior to NICE 2011 guidance, different criteria were used to diagnose (BP>160/100, not BAPM or HBPM), and so review of this long-term BP graph could help a clinician when reviewing the patient record. • Introduce patient education service (see below)	
Measure outcomes	• Benchmark progress and feedback to practices via practice CVD clinical champions. (See example feedback chart in appendix 3)	

Key steps in the improvement process	Comments	Resources[31]
Supporting communications and engagement	**Blood pressure campaign** BHH instigated a proactive integrated Blood Pressure Awareness campaign with a dedicated budget of £50k. Bespoke artwork for use within the campaign was created (available in the file pack). The campaign involved: • launch event, offering free BP checks to people taking part in a massive event in City Square. BHH sponsored a local radio station to host the event, interspersing blood pressure messages throughout • dedicated area of BHH website[34] about blood pressure • media relations and programme of press releases[35] • social media campaign[36] (commissioned from external agency). 	

[34] Section on blood pressure can be found on the Bradford Healthy Hearts website, http://www.bradfordshealthyhearts.co.uk/blood-pressure (information accessed 1 February 2018)

[35] Press releases can be found on the Bradford Healthy Hearts website, http://www.bradfordshealthyhearts.co.uk/news (information accessed 1 February 2018)

[36] Example of the social media campaign can be found on Facebook, https://www.facebook.com/bradfordshealthyhearts (information accessed 1 February 2018)

Key steps in the improvement process	Comments	Resources[31]
	• posters (artwork is in file pack) • patient information leaflet[37] (artwork is available for local customisation) • lapel badges ('Ask me about blood pressure') • six-week radio advertising campaign (to back up *Healthy Hearts'* call for everyone to know their blood pressure numbers and take steps to reduce them if they're too high).	
Education Programme	• Educate nominated clinical champion in every practice. • Commission or provide training programme for patients. *BHH commissioned BOC to provide hypertension education. This was a 12 month contract to provide education to newly diagnosed patients with hypertension. Patients were identified via system searches or by practices and then each practice sent a letter to their patients inviting them to a course of four sessions. The training helped patients understand about hypertension, how to measure their own blood pressure and what to do if it goes outside given parameters (self titration was not introduced). Patients were encouraged to keep a diary and record BP measurements. Feedback from the patients was overwhelmingly positive and reductions in BP were seen by the end of the education program. The full results will be available when the evaluation is complete.*	

[37] PDF version of the Blood Pressure leaflet can be found on the Bradford Healthy Hearts website, http://www.bradfordshealthyhearts.co.uk/media/Blood%20Presure/Bradford%20Healthy%20Hearts%20Blood%20Pressure%20Leaflet.pdf (information accessed 1 February 2018)

10. Communications and Engagement

Comprehensive and high profile communications and engagement with a wide range of stakeholders has been a key feature of the Bradford's Healthy Hearts campaign and a key success factor. This proactive approach has supported the CCG to gain a wide sense of programme ownership by health professionals, patients and the general public as well as providing essential information and support to the clinical programmes.

CCGs will have their own communications channels and campaign tactics so this resource pack provides an overview of the action taken by BHH to stimulate other local health economies' own communications and engagement plans.

However, NHS Bradford Districts CCG has generously agreed to share its tried and tested communications resources, including their comprehensive, well designed website and campaign materials.

10.1 Key success factors

- Front line GP ownership of the issue from the outset, and collective agreement to do something about it but with a *work-load-light* approach.
- Strong leadership that demonstrated the importance of the programme to a range of stakeholders.
- Recognition from senior leadership that proactive and comprehensive communications was critical to the success of the programme.
- Involvement of the CCG's communications and engagement team as an integral part of the programme.
- Investment in communications to allow the use of a wide range of appropriate channels and media.
- Strong branding to allow all elements of the programme to be identified as being part of the campaign and thereby contributing to the programme's objectives.
- Dedicated campaign website bringing all campaign information together in one place with information for health professionals, patients and the general public. The BHH website came runner-up in the Association of Healthcare Communications and Marketing awards in the best website category.
- A number of channels across a range of media, including print, radio, social media and attention-grabbing flash mobs[38].

[38] Information on the flash mob can be found on the Telegraph and Argus website, http://www.thetelegraphandargus.co.uk/news/11795004.Young_musicians_serenade_passers_by_during_Shipley__flash_mob__gathering/?ref=rss (information accessed 1 February 2018)

- Involvement of clinical and other staff in the design and planning of the campaign.
- Joint working with partners, including local authority colleagues, to allow consistent, co-ordinated messaging and integration of partner services, such as smoking cessation and Bradford Encouraging Exercise in People (BEEP) programme[39].
- Recognising the important role of other health professionals as advocates and messengers to colleagues and service user, e.g. the use of community pharmacists to help explain changes in statin prescribing to patients[40].
- Patient education programme with BHH branding involved patients and provided evidence of the programme in action.
- Communications materials and website developed with service user involvement.
- Linking communications with national health days and local events to maximise opportunities for publicity and awareness raising.
- Celebration of the programme's success by way of award nominations to instil sense of pride and ownership of achievements.

10.2 Learning

BHH has learnt along the way and has the following tips for similar campaigns:

- Start engaging with service users from the outset, making best use of GP practice Patient Participation Groups (PPG) to engage with GP practice patients.
- More formal planning with partners – start it early and get everyone signed up and working to the same plan.

[39] Information on Bradford's Encouraging Exercise in People (BEEP) programme can be found on the Active Bradford website, http://www.activebradford.com/beep-exercise-referral/ (information accessed 1 February 2018)

[40] Example of the use of community pharmacists to help explain changes in statin prescribing to patients can be found on the Bradford Healthy Hearts YouTube channel is available on the YouTube website, https://www.youtube.com/channel/UCTdzLbvFWDC_1MAeq-maMYg (information accessed 1 February 2018)

10.3 The communications and engagement campaign

The BHH awareness-raising programme had two phases: the first with patients who had already been diagnosed, and the second to raise awareness of heart health generally among the local population.

The BHH communications and engagement aims to:

- promote understanding of the future treatment of patients with heart disease in Bradford Districts CCG's area
- raise awareness of heart health
- develop and provide accessible communications materials to support understanding of the disease and how it is treated
- ensure that stakeholders have the opportunity to engage with and, where appropriate, participate in the campaign
- ensure that communications are accurate, timely and effective
- promote the campaign in the news and social media
- work effectively with general practice, pharmacies, service providers and Public Health to promote and implement campaign messages
    - develop tools for practices to help them communicate back the risk to patients and help them go on to treatment.

10.4 Key audiences

Stakeholders were identified in the following groupings:

- **partners** – approach to involve and inform throughout in a variety of ways including meetings, briefings, newsletters, scrutiny reports, board papers, etc.

- **service providers** – involve at an early opportunity in planning and preparation, particularly though involvement with project team/steering group.

- **monitors and opinion formers** – involve as partners in the BHH programme.

- **service users** – involve in co-production of information, discussions at patient participation groups (PPGs), face-to-face discussions with GPs in surgery, provision of education events, literature, media reports, etc.

See appendix 4 for more detail.

A key element of the campaign was strong messages around the causes of cardio vascular disease (CVD) described as Bradford's biggest killers (as shown on the website excerpt below).

10.5 Communication Channels

A broad range of channels were used including:

Channel	Comments	Resources[41]
Website	The BHH website provides information for both patients and professionals. Its innovative design provides a wealth of engaging content. You can see the site at www.bradfordshealthyhearts.co.uk/[42] The website provides information to patients to support new clinical pathways as well as providing lifestyle information relating to the prevention of CVD. This comprises information and interactive links about lifestyle choices and a guide to making good choices in the areas that are recognised risk factors for CVD, including smoking, alcohol, diet, weight, blood pressure, stress, diabetes and exercise. Usage statistics for the BHH website (Quarter 3, 2016) showed: • 10,383 users (82% new visitors) • 02:05 average time on a page • 12,362 views of the BP campaign webpage • Bounce rate remained higher than expected – the CCG is looking at ways to get people more involved in the site on a regular basis.	Bradford's willingness to share its resources has provided the opportunity for other CCGs to create their own version of the BHH website based on a slightly amended version of Bradford's design and copy (to meet the new NHS identity guidelines[43]). NHS RightCare has commissioned the agency who designed the site to develop a template Healthy Hearts site and a set up wizard to create a similar site for other interested CCGs at a competitive cost (see appendix 5 for more information).

[41] Resources will be made available via a hyperlink wherever possible or in a file pack available by emailing rightcare@nhs.net

[42] The Healthy Hearts website is available at http://www.bradfordshealthyhearts.co.uk/ (information accessed 1 February 2018)

[43] The NHS Identity guidelines can be found on the NHS England website, https://www.england.nhs.uk/nhsidentity/ (information accessed 1 February 2018)

Channel	Comments	Resources[41]
Video	Video has been used to educate and inform both service users and health professionals using trusted clinicians.	You can see examples on the BHH YouTube channel[44].
Banners	Pull up banners support the campaign and were supplied to, and displayed at, every GP practice taking part in the BHH programme.	
Promotional items	A range of promotional items were procured (including t-shirts, pens, mugs, pedometers, wristbands, memory sticks) to help strengthen the campaign's promotional brand. A heart shaped frame is used to capture selfies.	

[44] Example of videos used by Bradford Healthy Hearts can be found on the Bradford Healthy Hearts YouTube channel, https://www.youtube.com/channel/UCTdzLbvFWDC_1MAeq-maMYg (information accessed 1 February 2018)

Channel	Comments	Resources[41]
Leaflets	A generic BHH leaflet was produced, as well as leaflets for specific campaigns (e.g. blood pressure). These were supplied to the public via GP practices, hospital departments, pharmacies etc, and used at promotional events.	 A copy is available in the file pack
Media	Bradford's proactive approach with the media has helped to raise awareness amongst the general public. The public campaign was launched on Valentine's Day 2015 (during national heart month) with a 'flash mob' involving young musicians who suddenly gathered together to perform in the street. The blood pressure campaign was launched at the World Record breaking "Love Bradford" event[45], providing free blood pressure tests and advice to some of the thousands of people waiting to take part in the event. Linking to events such as national health days, celebrating award successes	See the BHH website for examples of their media releases[46].

[45] Information on the launch of the blood pressure campaign can be found on the Bradford and District CCG website, http://www.bradforddistrictsccg.nhs.uk/news/healthy-hearts-lends-its-support-to-love-bradford-event/ (information accessed 1 February 2018)

[46] Examples of media releases used by Bradford Healthy Hearts can be found on the Bradford Healthy Hearts website, http://www.bradfordshealthyhearts.co.uk/news (information accessed 1 February 2018)
http://www.bradforddistrictsccg.nhs.uk/news/healthy-hearts-lends-its-support-to-love-bradford-event/

Channel	Comments	Resources[41]
	and open days, regular media releases generated interest and maintained momentum in the campaign.	
Social media	Facebook[47] – a dedicated BHH Facebook page is used by Bradford. Facebook information needs to be regularly updated, and links made with a wide range of current stories/events to help promote the programme. Twitter – the CCG corporate Twitter account is used to engage. YouTube[48] – a dedicated BHH YouTube channel is used to host BHH videos, which are then embedded in the BHH website.	A pay per click campaign via Facebook and Google was procured to drive traffic to the website. *Facebook artwork can be found in the file pack*
Internal Communications	Internal communications included Board reports, articles in staff newsletters and the CCG annual report, photo displays of events, circulation of media stories and importantly high profile GPs doing the "walk and talk."	

[47] The Bradford Healthy Hearts' Facebook page is available at https://www.facebook.com/bradfordshealthyhearts (information accessed 1 February 2018)

[48] The Bradford Healthy Hearts' YouTube channel is available at https://www.youtube.com/channel/UCTdzLbvFWDC_1MAeq-maMYgs (information accessed 1 February 2018)

10.6 Patient Education Programme

The patient education programme was a key part of the programme and all patients over 40 years of age were invited to attend education sessions.

Patients were identified by their GP practice and sent an invitation to attend the sessions that were held in central Bradford and attended by up to 100 people. Invites were sent out via text using a text template provided by BHH (available in the file pack). Individuals attending the sessions were from a wide range of age groups, including older people.

The training was commissioned from Et al training[49].

A forward programme of topics was arranged covering areas including atrial fibrillation, stroke, diabetes and heart disease.

In retrospect, the CCG have reflected that it would likely have been more effective to consider the wide-ranging bi-monthly and open patient education program earlier in the programme.

10.7 Blood pressure campaign

A central element of the hypertension part of the programme was a proactive integrated Blood Pressure Awareness campaign with a dedicated budget of £50k. See details within the hypertension clinical programme above (page 32).

11. Conclusion

This resource pack was developed to share Bradford Districts CCG's experience and to offer support to other areas interested in the service. It is not intended to be exhaustive or prescriptive.

We hope you find it useful and once again, many thanks to Bradford Districts CCG for sharing its expertise and resources.

If you have experience to share regarding a similar service or following the use of this pack, please do let us know so we can learn from each other.

For more information about NHS RightCare or this resource pack, including requests for the accompanying file pack go to:

www.england.nhs.uk/rightcare

Email: rightcare@nhs.net

Appendix 1

References for efficacy are:

- Aspirin, Warfarin: Aguilar, M. & Hart, R. (2005)[50], and Aguilar M, Hart R. (2005)[51].
- Aspirin + clopidogrel: Connolly, S.J. et al. (2009) [52]

The efficacy of aspirin+clopidogrel compared to placebo is imputed based on ASA vs. placebo RR 0.78, ACTIVE-A RR 0.72 = RR 0.56, RRR 44%. Annual major bleeding vs. placebo can be imputed based on being 0.7% higher per year than with ASA alone, which is 0.45%/year higher than no aspirin (Derry, S. & Loke, Y.K. (2000)) [53] = absolute 1.15%/year excess risk = NNH 87 x 1 year. However, this tool describes it as "same as warfarin", which the Active Writing Group (2006)[54] showed directly.

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[50] Aguilar, M. & Hart, R. (2005) Oral anticoagulants for preventing stroke in patients with non-valvular atrial fibrillation and no previous history of stroke or transient ischemic attacks. *Cochrane Database of Systematic Reviews* 2005, Issue 3. Art. No.: CD001927. DOI: 10.1002/14651858.CD001927.pub2. This review can be found on the Cochrane Review website, http://onlinelibrary.wiley.com/doi/10.1002/14651858.CD001927.pub2/full (information accessed 1 February 2018)

[51] Aguilar M, Hart R. (2005) Antiplatelet therapy for preventing stroke in patients with non-valvular atrial fibrillation and no previous history of stroke or transient ischemic attacks. *Cochrane Database of Systematic Reviews* 2005, Issue 4. Art. No.: CD001925. DOI: 10.1002/14651858.CD001925.pub2 This review can be found on the Cochrane Review website, http://onlinelibrary.wiley.com/doi/10.1002/14651858.CD001925.pub2/full (information accessed 1 February 2018)

[52] Connolly, S.J. et al. (2009) Effect of clopidogrel added to aspirin in patients with atrial fibrillation. *New England Journal of Medicine*, **14**;360(20) pp 2066-78. This review can be found on the Cochrane Review website, http://www.nejm.org/doi/full/10.1056/NEJMoa0901301 (information accessed 1 February 2018)

[53] Derry, S. & Loke, Y.K. (2000) Risk of gastrointestinal haemorrhage with long term use of aspirin: meta-analysis. *British Medical Journal*. **11**;321(7270) pp 1183-7. This article can be found on the British Medical Journal website, http://www.bmj.com/content/321/7270/1183.long (information accessed 1 February 2018)

[54] The ACTIVE Writing Group on behalf of the ACTIVE Investigators (2016) Clopidogrel plus aspirin versus oral anticoagulation for atrial fibrillation in the Atrial fibrillation Clopidogrel Trial with Irbesartan for prevention of Vascular Events (ACTIVE W): a randomised controlled trial. *The Lancet* , **367**(9526) pp 1903 - 1912 This article can be found on The Lancet website, http://www.thelancet.com/journals/lancet/article/PIIS0140-6736(06)68845-4/abstract (information accessed 1 February 2018)

- Efficacy & safety of dabigatran: Connolly. S.J. et al. (2009) [55] & Connolly. S.J. et al. (2010) [56]

110 mg bid: non-inferior to warfarin for stroke [RR 0.91 (0.74–1.11)], less major bleeding than warfarin [RR 0.8 (0.69–0.93)]. NNT (chance of harm) for major bleeding compared to PLACEBO is imputed by augmenting the estimated ARR for warfarin (1.79%) by 20% (corresponding to the RR of 0.8).
150 mg bid: superior to warfarin for stroke [RR 0.65 (0.53–0.82)]. Efficacy vs. placebo is imputed by multiplyng warfarin's RR vs. placebo (0.33) by this effect to yield a RR of 0.21. Major bleeding similar to warfarin [0.93 (0.81–1.07)]

- Efficacy & safety of rivaroxaban: Patel, M.R. et al. (2011) [57]

Patel, M.R. et al. (2011) showed rivaroxaban to be non-inferior to warfarin with respect to stroke (HR 0.79 [0.66=0.96]). Debate exists about whether it was superior to warfarin as NI, on-treatment, and ITT analyses differed somewhat with respect to the significance of the $HR_0.8$. Major bleeding was similar to warfarin (HR 1.04 [0.96–1.11])

- Efficacy and safety of apixaban: Granger, C.B. et al. (2011)[58]

Granger, C.B. et al. (2011) showed apixaban to be superior to warfarin for stroke prevention (HR 0.79 [0.66–0.95]), and reduced mortality (0.89 [0.8–0.99]). Major bleeding was significantly less with apixaban (0.69 [0.6–0.8]), as was hemorrhagic stroke.

- Efficacy and safety of edoxaban: Giugliano, R.P. et al. (2013)[59]

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[55] Connolly. S.J. et al. (2009) Dabigatran versus warfarin in patients with atrial fibrillation. *New England Journal of Medicine* ***361***(12) pp 139-151.
This article can be found on the United States National Institute of Health website, https://www.ncbi.nlm.nih.gov/pubmed/19717844 (information accessed 1 February 2018)

[56] Connolly. S.J. et al. (2010) Newly Identified Events in the RE-LY Trial. *New England Journal of Medicine* 363 pp. 1875-1876.
This article can be found on the United States National Institute of Health website, http://www.nejm.org/doi/full/10.1056/NEJMc1007378 (information accessed 1 February 2018)

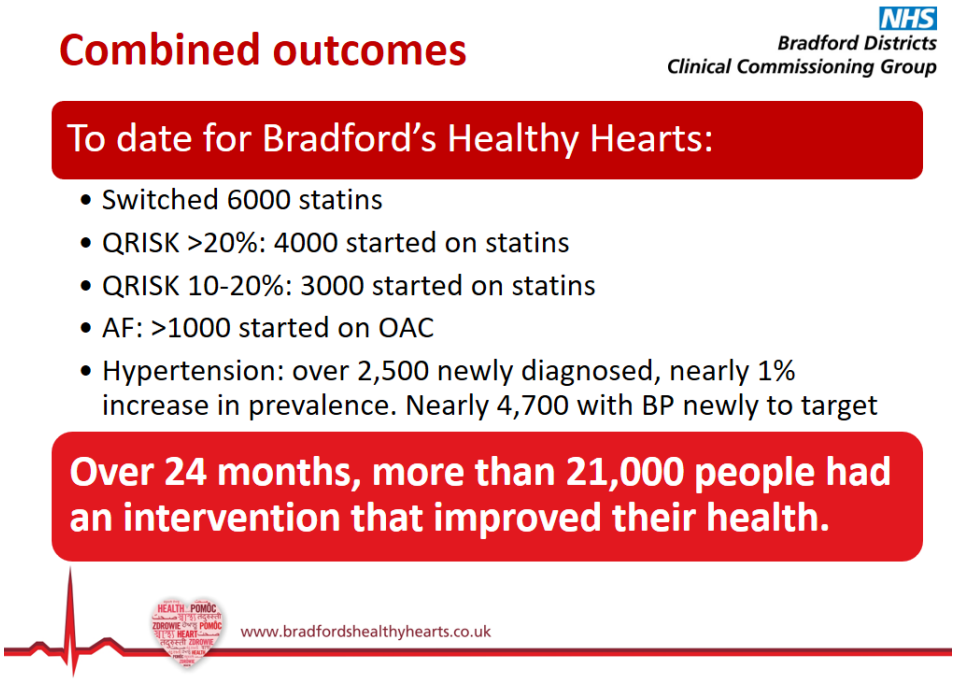
[57] Patel, M.R. et al. (2011) Rivaroxaban versus Warfarin in Nonvalvular Atrial Fibrillation, *New England Journal of Medicine*, **365** pp.883-891
This article can be found on the New England Journal of Medicine website, http://www.nejm.org/doi/full/10.1056/NEJMc1007378 (information accessed 1 February 2018)

[58] Granger, C.B. et al (2011) Apixaban versus Warfarin in Patients with Atrial Fibrillation *New England Journal of Medicine*, **365** pp. 981-992
This article can be found on the New England Journal of Medicine website, http://www.nejm.org/doi/full/10.1056/NEJMoa1107039 (information accessed 1 February 2018)

[59] Giugliano, R.P. et al. (2013) Edoxaban versus Warfarin in Patients with Atrial Fibrillation. *New England Journal of Medicine*, **369** pp. 2093-2104
This article can be found on the New England Journal of Medicine website, http://www.nejm.org/doi/full/10.1056/NEJMoa1310907 (information accessed 1 February 2018)

Neither edoxaban dose had superior efficacy vs. warfarin [HR 0.87 (0.73–1.04), HR 1.13 (0.96–1.34) for high and low-dose, respectively] using the using the most appropriate analysis, intention-to-treat. Both doses showed less hemorrhagic stroke than warfarin and major bleeding was significantly less with both doses [HR 0.80 (0.71–0.91), HR 0.47 (0.41–0.55) for high and low-dose, respectively].

Appendix 2 – Outcomes of BHH programme[60]



CVD Mortality Rates in the graph below are compared with neighbouring CCGs as the data was readily available. These comprise Bradford City CCG (BC CCG) and Airedale, Wharfedale and Craven CCG (AWC CCG).

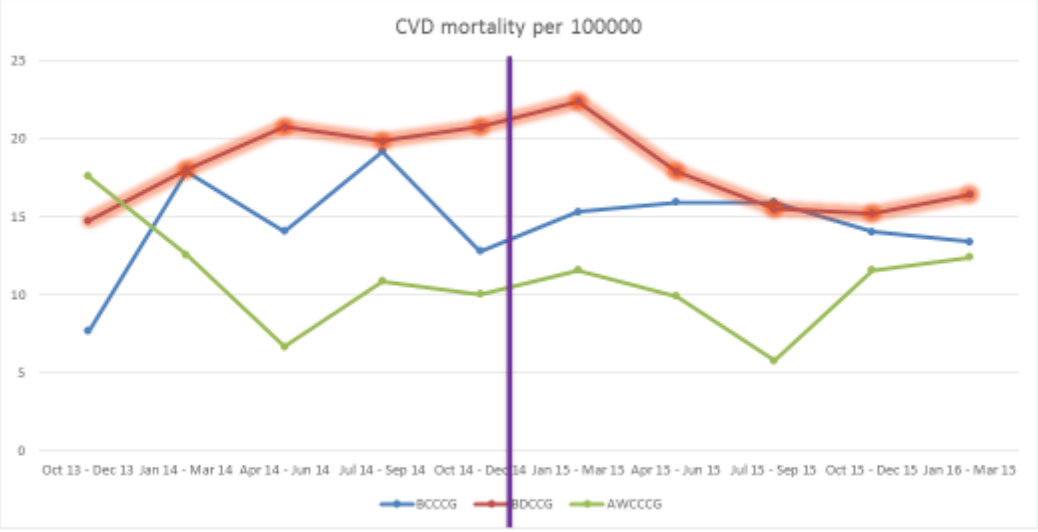
The data team compared the p values prior to the programme which confirmed that there was no statistical significance in non-electives averaged over 15 months prior to the programme launch and then compared the average over next 15 months.

No further data is currently available. BHH have reported that data has been a real challenge since early 2016 due to changes with the CSU contract.

The BHH data team used standard NICE estimates for NHS cost of MIs and strokes.

[60] The data used in the graphs was checked by a professor in Canada's McMaster University.

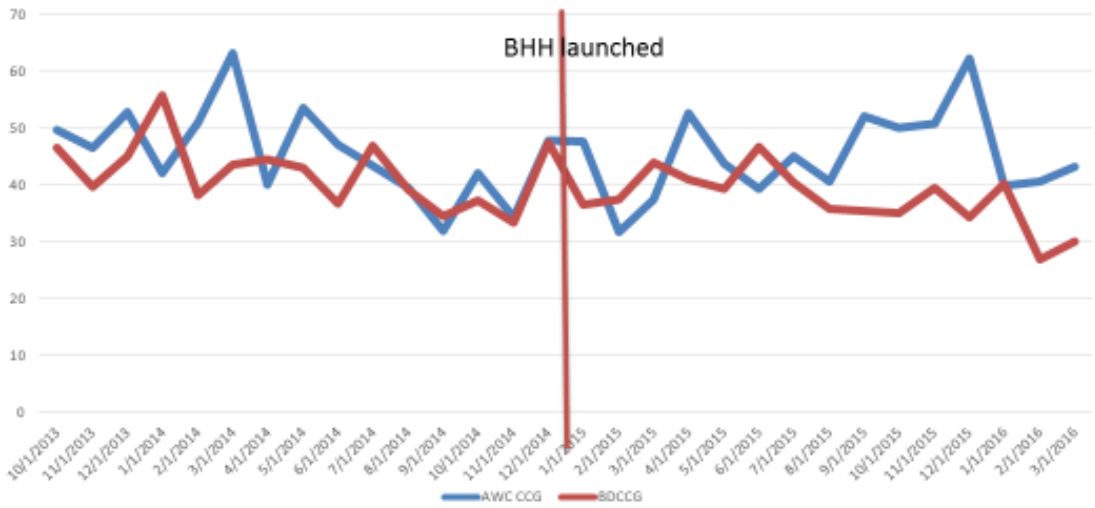
CVD mortality rate under 75 per 100,000 population pre-BHH versus post-BHH



Percentage change in CVD mortality under 75 (absolute numbers)

Airedale, Wharfedale & Craven CCG	Bradford City CCG	Bradford Districts CCG
• Increased 3%	• Reduced 6.5%	• Reduced 6.6%

Under 75 non-elective admissions for CVD (MI and stroke)



www.bradfordshealthyhearts.co.uk

NHS
Bradford Districts
Clinical Commissioning Group

Non-elective admissions before BHH intervention vs "control group", AWC CCG

Airedale, Wharfedale & Craven CCG	Bradford Districts CCG
• Mean CVD non-elective per month per 100,000 population = 46.4/m/100,000	• Mean CVD non-elective per month per 100,000 population = 42.8/m/100,000

P = 0.1 for difference between groups

No statistical difference between groups

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NHS
Bradford Districts
Clinical Commissioning Group

Non-elective admissions after BHH intervention vs "control" group

Airedale, Wharfedale & Craven CCG	Bradford Districts CCG
• Mean CVD non-elective per month per 100,000 population = 45.7/m/100,000	• Mean CVD non-elective per month per 100,000 population = 37.6/m/100,000

P=0.003 for difference between groups
8.1 fewer admissions per month per 100,000

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Clinical Commissioning Group

Non-elective admissions: change over time*

NHS
Bradford Districts
Clinical Commissioning Group

Airedale, Wharfedale & Craven CCG	Bradford City CCG	Bradford Districts CCG
• CVD non-elective admissions change over time = -1% (-8 fewer CVD events)	• CVD non-elective admissions change over time = +6% (32 additional CVD events)	• CVD non-elective admissions change over time = -10% (**-211 fewer CVD events**) • 137 fewer MIs and 74 fewer strokes

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*As compared to the previous 15 months

Conservative cost savings based on real outcome figures

NHS
Bradford Districts
Clinical Commissioning Group

Cost of stroke = £11,000

74*11000= £814,000

Cost of MI = £5,500

137*5500= £753,500

Gross savings £1,567,500

Net savings approximately £1,200,000 over first 15 months

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Lipid management workstream

Over 5 months, 5,300 patients had statins switched and by 6 months, this was over 6,000 total switches.

Early results: (for QRISK 10-20% and >20%) at December 2015

- n=2163 - the number of new statin prescriptions (not switches)
- Mean total cholesterol reduction was 0.39 mmol/l reduction in that population
- P<0.001 for change

QRISK2 is a prediction algorithm for CVD that uses traditional risk factors (age, systolic blood pressure, smoking status and ratio of total serum cholesterol to high-density lipoprotein cholesterol) together with body mass index, ethnicity, measures of deprivation, family history, chronic kidney disease, rheumatoid arthritis, atrial fibrillation, diabetes mellitus, and antihypertensive treatment

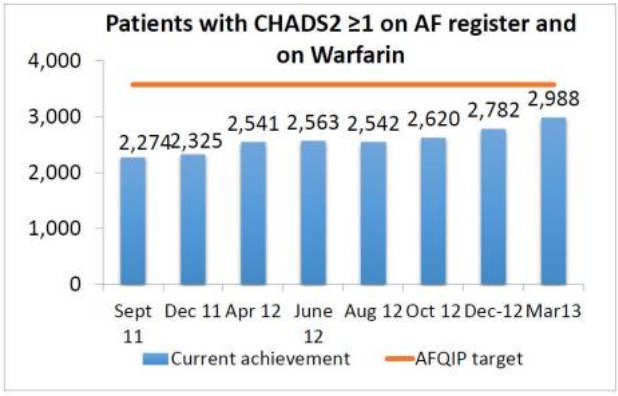
Atrial fibrillation workstream

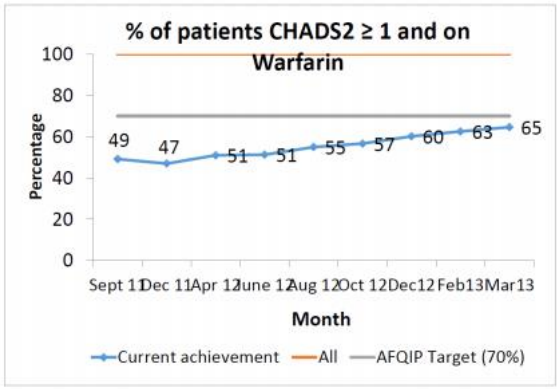
98% of patients were coded with CHADSVASc, scored automatically using background IT tools.

The graphs below show the percentage of patients on anti-coagulant medication before the BHH programme.

At May 2016, following the BHH programme, achievement was up to a peak of 82% anticoagulated (CHADSVASC of 1 or above).

The CCG do not have any more recent data due to changes to the CCG data provider.





- Mean CHADVASc = 4, Number needed to treat (NNT) to prevent one stroke = 11
- Potentially programme could prevent 82 strokes (per 1.5-1.7 years depending on study[61])
- Using NICE's assumption, cost of stroke = £11,000
- This could potentially save £900,000
- Also frees up 2,200 "bed days" per year in hospital

[61] Aguilar, M. & Hart, R. (2005) Oral anticoagulants for preventing stroke in patients with non-valvular atrial fibrillation and no previous history of stroke or transient ischemic attacks. *Cochrane Database of Systematic Reviews* 2005, Issue 3. Art. No.: CD001927. DOI: 10.1002/14651858.CD001927.pub2. This review can be found on the Cochrane Review website, http://onlinelibrary.wiley.com/doi/10.1002/14651858.CD001927.pub2/full (information accessed 1 February 2018)

Aguilar M, Hart R. (2005) Antiplatelet therapy for preventing stroke in patients with non-valvular atrial fibrillation and no previous history of stroke or transient ischemic attacks. *Cochrane Database of Systematic Reviews* 2005, Issue 4. Art. No.: CD001925. DOI: 10.1002/14651858.CD001925.pub2 This review can be found on the Cochrane Review website, http://onlinelibrary.wiley.com/doi/10.1002/14651858.CD001925.pub2/full (information accessed 1 February 2018)

Hypertension work stream

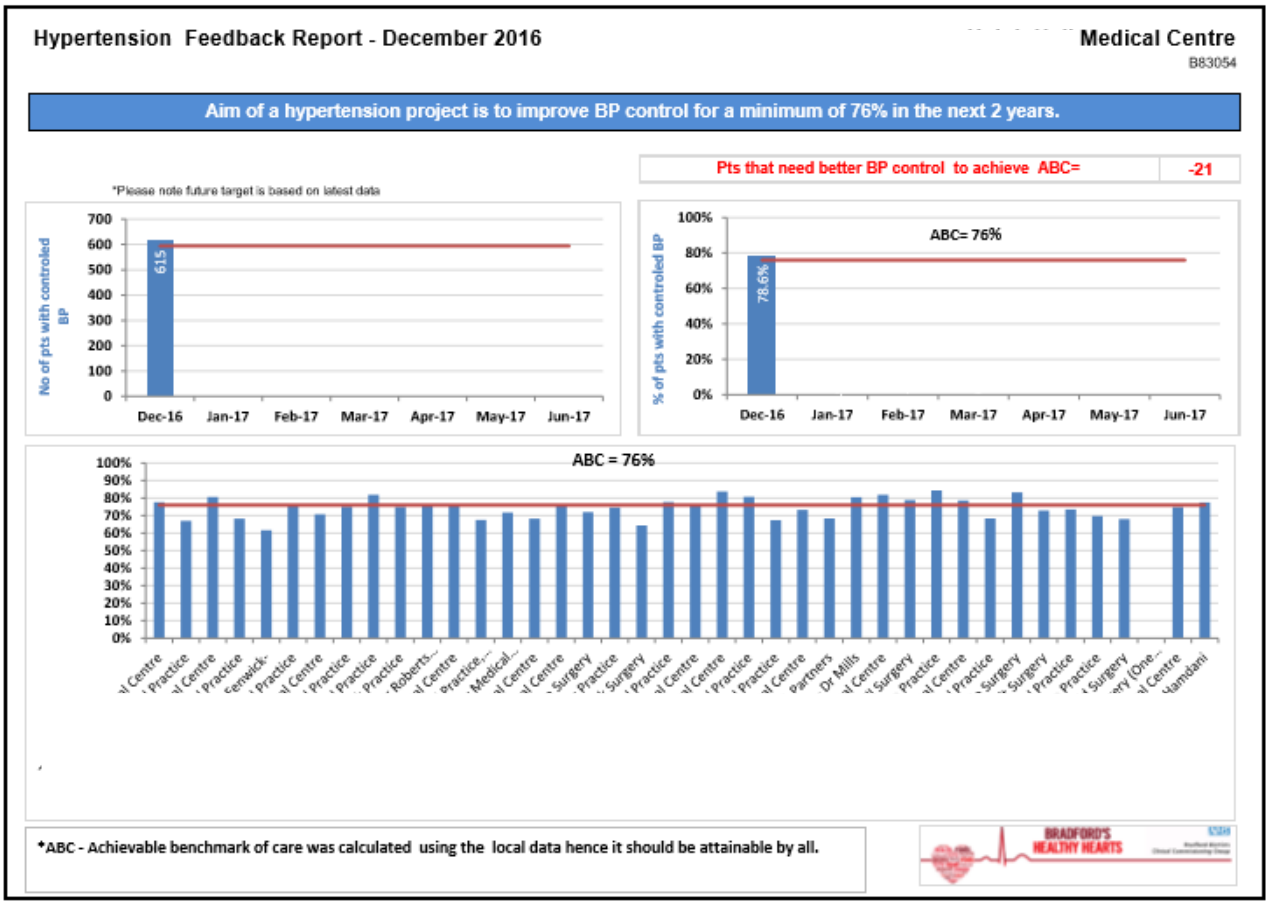
Nearly 4700 patients have now treated to <140/90 compared to 12 months ago. This equates to 75.7% compared to the 62% baseline.

Appendix 3: BHH Programme Board membership

Role and responsibility
Programme Director/SRO Responsible for the Programme and delivery of benefits and therefore should take appropriate action where necessary to ensure success
SRO/Clinical lead Responsible for the Programme and delivery of benefits and therefore should take appropriate action where necessary to ensure success
Public Health lead/Programme board member/ Expert advisor Responsibility to provide advice and guidance around CVD epidemiology, effectiveness of interventions and implantation strategy, and any bespoke advice and guidance from public health perspective.
Programme manager Responsible for managing the delivery of the change needed to achieve the strategic objective of BHH.
Programme board member/ Expert advisor/Programme director from CSU point of view. Provide guidance and advice regarding implementation strategy for the work streams lead by CSU only.
Responsible for 2nd part of the programme. Links primary and secondary care
Programme change manager. Responsible for making changes needed to achieve the strategic objective for the work streams lead by the CSU only
Clinical Lead/Programme board expert advisor. Responsible for clinical advice and guidance to the BHH board. Provide practices with clinical advice and sign off on local guidelines and protocols. Bespoke support and advice to primary and secondary care clinicians.

Appendix 4

Monthly workstream dashboard

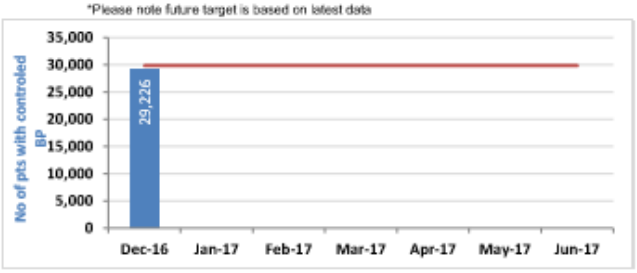


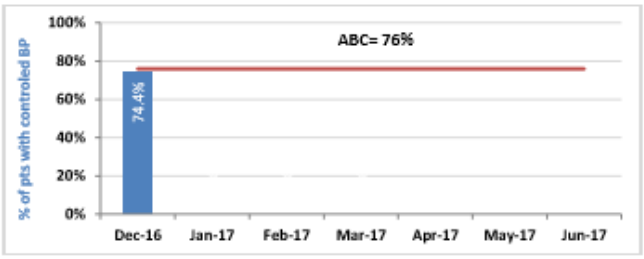
Hypertension Feedback Report - December 2016 **Summary Feedback**

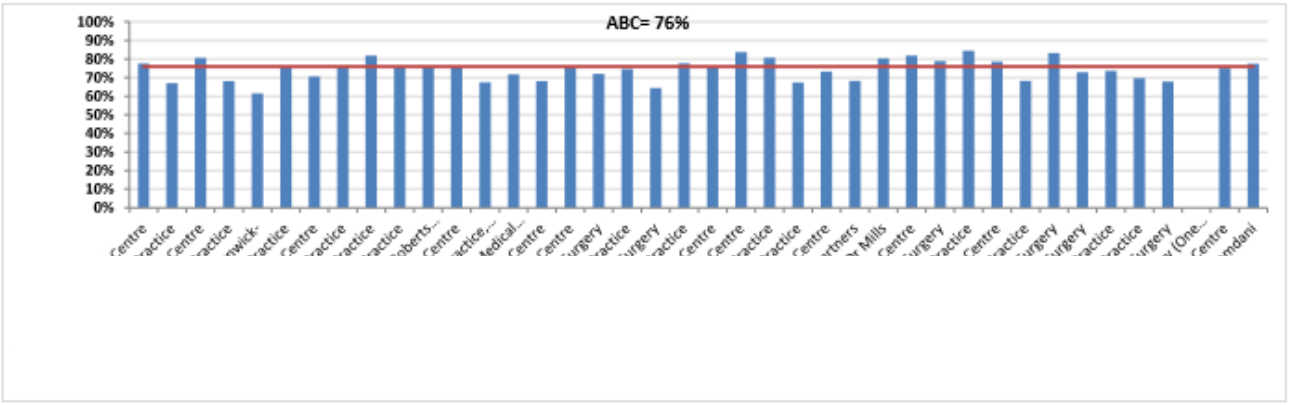
Aim of a hypertension project is to improve BP control for a minimum of 76% in the next 2 years.

Pts that need better BP control to achieve ABC=	642

*Please note future target is based on latest data







*ABC - Achievable benchmark of care was calculated using the local data hence it should be attainable by all.

Appendix 4: BHH stakeholder list

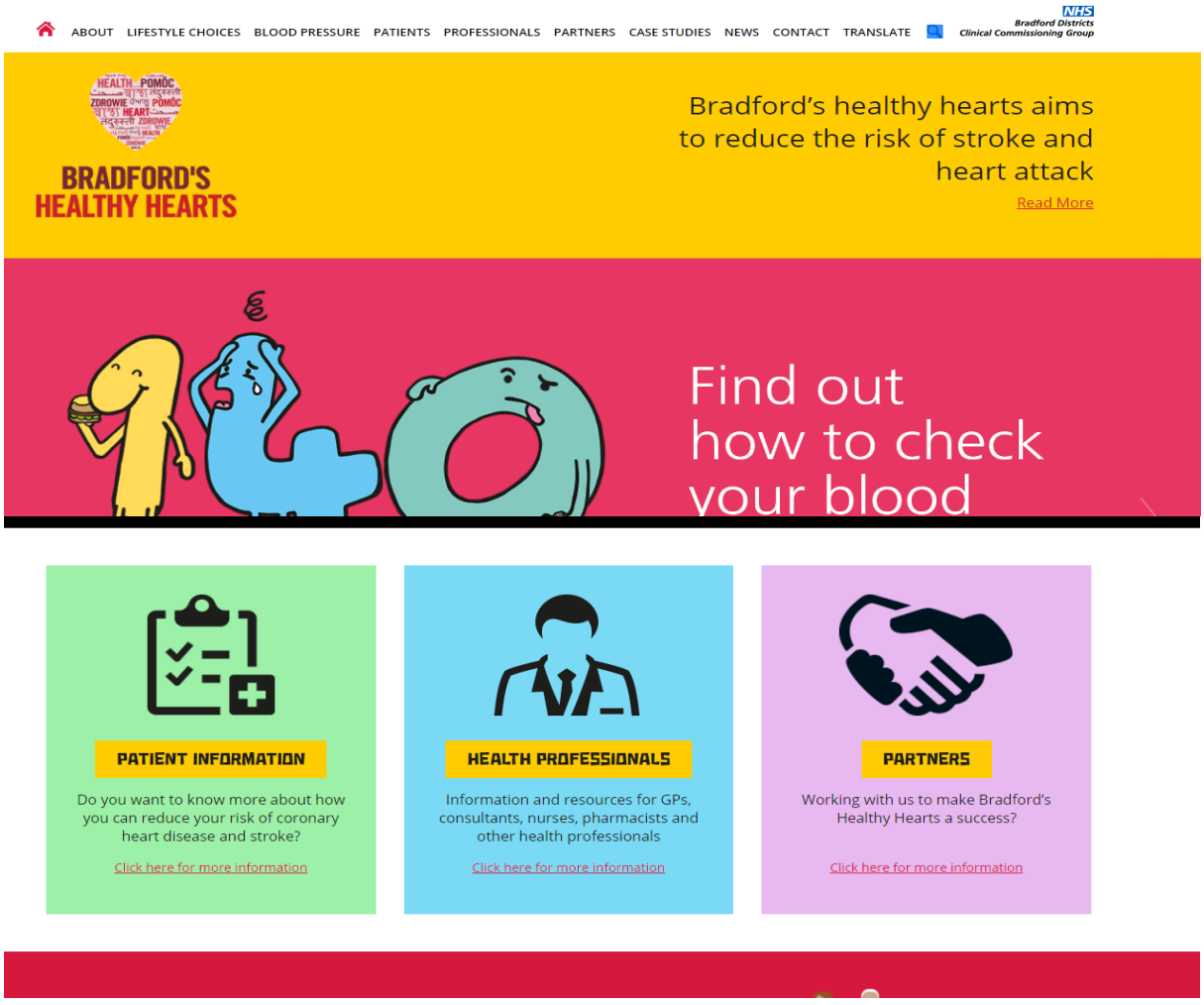
Partners	Member practices and their staff Governing body and clinical board Staff working in Bradford Districts CCG Public Health
Service providers	Bradford Teaching Hospitals NHS Foundation Trust Airedale NHS Trust Yorkshire Ambulance Service Bradford District Care Trust Pharmacies Bradford District Care Trust Local Care Direct Pharmacies Private gymnasiums
Monitors and opinion formers	Health and Wellbeing Board Area Committees Health & Social Care OSC Political stakeholders, including MPs and local councillors Healthwatch Bradford and District
Service users	Patients Patient and VCS organisations (including PPGs, British Heart Foundation, Atrial Fibrillation Groups, Arrthymia Alliance, Stroke Association, etc) Carers General Public Protected groups

Appendix 5: Healthy Hearts website offer

Bradford Healthy Hearts Website

NHS RightCare may be able to supply your CCG with your own version of this website. Please contact nhsrightcare@nhs.net for further details

http://bradfordshealthyhearts.co.uk/



WHAT HEALTHY HEARTS MEANS TO THE PEOPLE OF BRADFORD

Bradford has one of the worst death rates from heart disease in England. That's why one of Bradford Districts Clinical Commissioning Group's main priorities is to reduce the number of deaths caused by heart attack and stroke.

Find out more

Stop Bradford's biggest killer now!
Look after your heart with Bradford's Healthy Hearts

BRADFORD'S

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