



Public Health
England

Protecting and improving the nation's health

Getting serious about cardiovascular disease in the South West

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Abbreviations

ACE-I	Angiotensin-converting enzyme inhibitor
AF	Atrial fibrillation
ALB	Arms-length body
ARB	Angiotensin II receptor blockers
B&NES	Bath & North East Somerset (CCG or local authority)
BACPR	British Association for Cardiovascular Prevention and Rehabilitation
BHF	British Heart Foundation
CCG	Clinical Commissioning Group
CHD	Coronary heart disease
CQUIN	Commissioning for Quality and Innovation
CVD	Cardiovascular disease
DALY	Disability-adjusted life year
DCLG	Ministry of Housing, Communities and Local Government
DDR	Dementia diagnosis rate
DEFRA	Department for the Environment, Food and Rural Affairs
HF	Heart failure
HLP	Healthy Living Pharmacy
HT	Hypertension
IBA	Alcohol Identification and Brief Advice
IMD	Index of Multiple Deprivation
LA	Local authority
LPC	Local Pharmaceutical Committee
LSOA	Lower super output area
LVD	Left ventricular dysfunction
NACR	National Audit for Cardiac Rehabilitation
NCVIN	National Cardiovascular Intelligence Network
NICE	National Institute for Health and Care Excellence
OHCA	Out-of-hospital cardiac arrest
PHE	Public Health England
QOF	Quality and Outcomes Framework
SMR	Standardised mortality ratio
SW	South West
TIA	Transient ischaemic attack

Executive summary

Background

Public Health England's (PHE) commitment to upgrade cardiovascular disease (CVD) prevention initiatives in collaboration with NHS England and NHS RightCare has been recognised in the Five Year Forward View and Next Steps on the Five Year Forward View.¹ This has resulted in a renewed focus on early identification and management of atrial fibrillation (AF), hypertension and cholesterol in primary care.

With around 7 million people affected by CVD in the UK, it is a significant cause of mortality and morbidity, being responsible for one in four premature deaths in the UK and 26% of all deaths in England in 2015.

Furthermore, CVD is linked to health inequalities with premature death rates from CVD in the most deprived 10% of the population almost double those in the least deprived 10%.²

Purpose

The purpose of this analysis is to support the prioritisation and decision-making by PHE, local authorities, NHS organisations, and other arms-length bodies (ALBs) in actively improving existing CVD prevention initiatives in South West England. This report is for commissioners and providers, and summarises the available data and best evidence to help target CVD prevention work along the whole care pathway in the South West.

Methodology

This report collates published data from 49 indicators across the 12 CCGs in the South West (as at 2016/17), grouping them according to the following themes: demographics, lifestyle risk factors, heart disease, stroke, kidney disease and diabetes.

A prioritisation matrix was developed using a double scoring system that attributed relative weights to each indicator. A composite score was derived by multiplying the indicator score by its weight, resulting in a weighted score of 0-9. The greater the

¹ Next Steps on the Five Year Forward View: <https://www.england.nhs.uk/publication/next-steps-on-the-nhs-five-year-forward-view/>

² PHE, Action plan for cardiovascular disease prevention, 2017 to 2018: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/648190/cardiovascular_disease_prevention_action_plan_2017_to_2018.pdf

cumulative score, the bigger the gaps identified when compared to the England average. Based on the cumulative scores, each CCG was ranked from one (highest priority for action) to 12 (lowest priority for action).

The issue

The prioritisation analysis resulted in the following ranking of South West CCGs according to their cumulative weighted score, highlighting areas that may benefit from targeted intervention:

- | | |
|--|----------------------------------|
| 1. Kernow | 7. Swindon |
| 2. South Devon and Torbay | 8. Gloucestershire |
| 3. Bristol | 9. North Somerset |
| 4. Somerset | 10. Wiltshire |
| 5. Northern, Eastern and Western Devon | 11. Bath and North East Somerset |
| 6. Dorset | 12. South Gloucestershire |

Across the 6 themes, Kernow is ranked as the highest priority in 3: demographics, lifestyle risk factors and stroke. Kernow is then ranked second for the heart disease and diabetes themes, and third in the kidney disease theme. Kernow CCG is followed by South Devon and Torbay and Bristol CCGs in the rankings. All 3 share common, high priority gaps in the following indicators:

- people receiving an NHS Health Check is lower than the England average
- the proportion of people with diagnosed hypertension that is managed to $\leq 150/90$ mmHg is lower than the England average
- the proportion of people with a history of stroke/TIA whose blood pressure is managed to $\leq 150/90$ mmHg is lower than the England average

In addition to the above, 2 of the 3 highest ranking CCGs also have high priority gaps in the following indicators:

- obesity prevalence is higher than the England average
- poor reported to estimated prevalence of hypertension compared to the England average
- high prevalence of stroke compared to the England average
- high non-elective spend for cerebrovascular disease per 1000 age/sex weighted population compared to the England average
- high non-elective spend for diabetes per 1000 population compared to the England average

The 49 indicators included in the prioritisation matrix only scratch the surface in terms of the gaps in CVD care and prevention. The report also touches on the broader range of data and programmes that are in place to prevent and manage CVD conditions, including cardiac rehabilitation, the related risk factors for CVD and vascular dementia, CVD in those with severe mental illness, out-of-hospital cardiac arrest, and the role of community pharmacy.

Recommendations for action

The following recommendations have been agreed by the South West CVD Prevention Board and are for action across all providers of health care in 2018/19.

Primary prevention

1. To work through the health and wellbeing network in the South West and with NHS providers to address the high obesity prevalence.
2. To develop a South West targeted campaign in collaboration with PHE Communications and Marketing teams to raise awareness of the scale and impact of CVD conditions in high risk areas and where to go for help and support. This will link in with the existing PHE One You campaign.

Secondary prevention

3. To improve the early detection and management of hypertension, atrial fibrillation and high cholesterol by working with CCGs and STPs to upscale prevention interventions.
4. To target CCGs and STPs with the highest need and offer practice-based solutions supporting health professionals across these pathways.

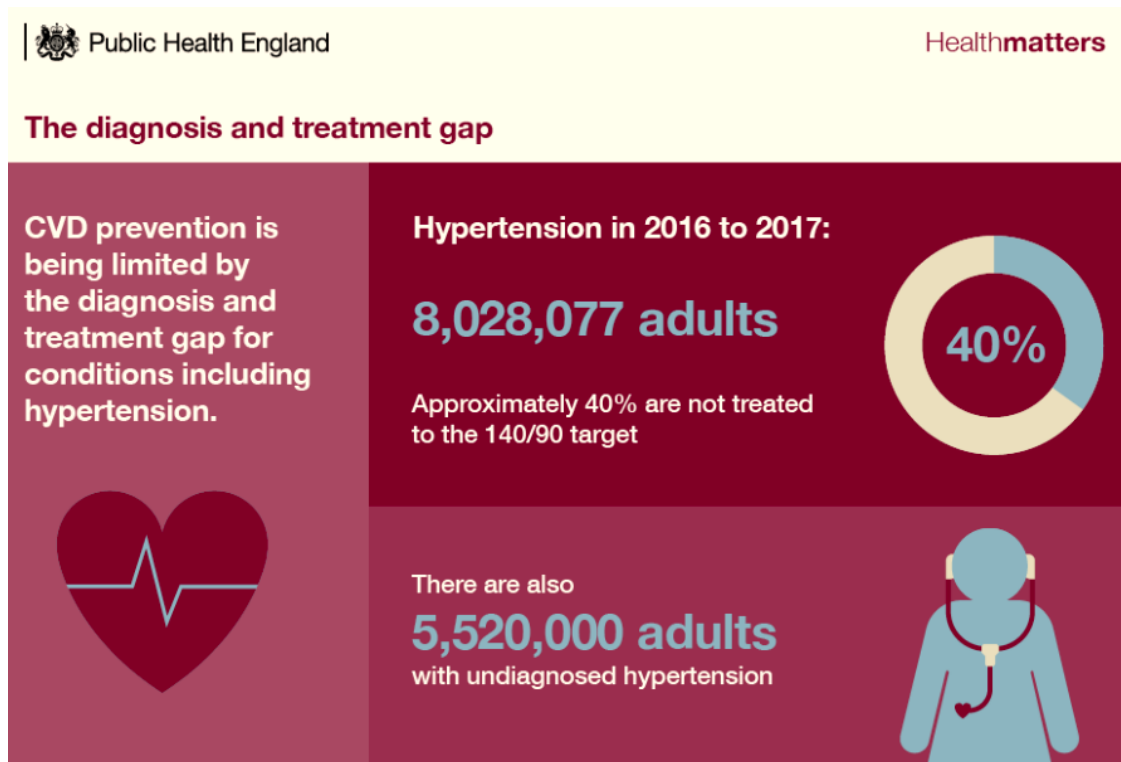
Tertiary prevention

5. To work with partners to identify and tackle variation in cardiac rehabilitation care in the South West to support all programmes to achieve at least 6 of the 7 national minimum standards.

1. Background

The need to upgrade prevention initiatives within the NHS is recognised in the Five Year Forward View and Next Steps on the Five Year Forward View.³ Cardiovascular disease (CVD) prevention is a national public health priority, and more specifically an NHS England South regional priority, with a renewed focus on atrial fibrillation (AF), hypertension and cholesterol targeted initiatives (see Figure 1). The World Health Organization has also set a series of targets for 2025 in its Non-Communicable Disease Global Monitoring Framework including overall reduction in premature mortality by 25% from cardiovascular disease, chronic respiratory disease, diabetes and neoplasms, and a 25% reduction in raised blood pressure.⁴

Figure 1: The hypertension diagnosis and treatment gap (Source: PHE)



The term ‘cardiovascular disease’ describes a family of diseases that result predominantly from atherosclerosis. This includes coronary heart disease (CHD), stroke and peripheral arterial disease, as well as vascular dementia, chronic kidney disease, cardiac arrhythmias, type 2 diabetes, sudden cardiac death and heart failure. There are numerous common risk factors that lead to CVD, including smoking, high cholesterol, high blood pressure, poor diet, harmful drinking and physical inactivity.

³ Next Steps on the Five Year Forward View: <https://www.england.nhs.uk/publication/next-steps-on-the-nhs-five-year-forward-view/>

⁴ WHO NCD Global Monitoring Framework http://www.who.int/nmh/global_monitoring_framework/en/

CVD is also linked to a range of environmental and social factors, including air pollution and financial inequalities (see Figure 2). For example, premature death rates from CVD in the most deprived 10% of the population are almost twice as high as in the least deprived 10%.

Around 7 million people are affected by CVD in the UK. It is a significant cause of mortality and morbidity, being responsible for one in 4 premature deaths in the UK and 26% of all deaths in England in 2015. It is estimated that CVD-related healthcare costs are £9 billion in the UK.⁵

Figure 2: The social, environmental and behavioural risk factors for CVD (Source: PHE)



⁵ PHE, Action plan for cardiovascular disease prevention, 2017 to 2018: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/648190/cardiovascular_disease_prevention_action_plan_2017_to_2018.pdf

2. Purpose

The purpose of this analysis is to support the prioritisation and decision-making by Public Health England (PHE), local authorities, NHS organisations, and other arms-length bodies (ALBs) in actively improving existing CVD prevention initiatives in South West England. This report is for commissioners and providers, and summarises the available data and best evidence to help target CVD prevention work along the whole care pathway.

The objectives of this report are to:

- outline the burden and the gap in care and quality along the CVD pathway in the South West
- summarise the work currently underway in the South West to improve CVD prevention (Appendix 3)
- provide guidance on effective and cost-effective interventions (Appendix 4)
- prioritise actions that target a reduction in the care and quality gap and improve CVD prevention

3. Methodology

3.1 Indicators used in the analysis

A total of 49 indicators across each of the 12 CCGs in the South West, as of 2016/17, were brought together for this analysis.⁶ See Appendix 1 for the full list of indicators and Appendix 2 for the high priority themes identified.

The indicators and accompanying data are based on the following PHE Fingertips profiles⁷: Cardiovascular Disease, Diabetes, Longer Lives, National General Practice Profiles, Local Alcohol Profiles for England, and Physical Activity; PHE's National Cardiovascular Disease Intelligence Network (NCVIN) Primary Care CVD Intelligence Packs⁸; as well as PHE Local Health⁹; NHS RightCare 'Where to Look' packs and metadata¹⁰; and DEFRA's Rural-Urban Classification¹¹. Additional resources include the British Heart Foundation and Stroke Association 'How can we do better?' packs¹², and NHS Health Checks data¹³.

The indicators were grouped into the following themes (n = number of indicators):

- demographics (n=5)
- lifestyle risk factors (n=5)
- heart disease pathway (n=13)
- stroke pathway (n=13)
- kidney disease pathway (n=6)
- diabetes pathway (n=7)

⁶ As of April 2018, Bristol, North Somerset and South Gloucestershire CCGs are now merged in to one CCG.

⁷ PHE Fingertips profiles: <https://fingertips.phe.org.uk/>

⁸ PHE NCVIN Primary Care CVD Intelligence Packs: <https://www.gov.uk/government/collections/cardiovascular-disease-primary-care-intelligence-packs>

⁹ PHE Local Health: <http://www.localhealth.org.uk/#v=map13;l=en>

¹⁰ NHS RightCare 'Where to look?' packs: <https://www.england.nhs.uk/rightcare/products/ccg-data-packs/where-to-look-packs/>

¹¹ DEFRA Rural-urban classification: <https://www.gov.uk/government/statistics/2011-rural-urban-classification-of-local-authority-and-other-higher-level-geographies-for-statistical-purposes>

¹² BHF and Stroke Association 'How can we do better?' packs: <https://www.bhf.org.uk/for-professionals/healthcare-professionals/commissioning-and-services/service-innovation/bp-how-can-we-do-better> and <https://www.stroke.org.uk/about-us/for-professionals/stroke-prevention>

¹³ NHS Health Checks data: https://www.healthcheck.nhs.uk/commissioners_and_providers/data/

3.2 The scoring system

A double scoring system was used attributing relative weights to each indicator as shown below.

Score (0 - 3)	Weight (1 - 3)
0 – data unavailable	1 – low impact/local and national priority
1 – better than England average	2 – medium impact/local and national priority
2 – similar to England average	3 – high impact/local and national priority
3 – worse than England average	

A composite score multiplying the specific indicator score by its weight gave each indicator a weighted score of 0-9. A total cumulative score of 441 was the maximum that any CCG could receive, and 49 was the minimum (as long as data was available for each indicator). A high cumulative score indicates a worse overall performance against the England averages for the indicators reviewed. Based on the cumulative scores, each CCG was ranked from one (highest priority for action) to 12 (lowest priority for action).

3.3 Data limitations

Data on the percentage treated by an early supported discharge team within Swindon CCG was unavailable and was, therefore, given a score of 0 (data unavailable). This may slightly underestimate the priority attributed to this CCG as a result.

Of the 49 indicators included, 2 are not compared to the England average but relatively to one another: deprivation and rural-urban classification:

- deprivation: of the 209 CCGs nationally, South West CCGs scored 3 if ranked 1-70 (more deprived); 2 if ranked 71-140; and one if ranked 141-209 (less deprived).
- rural-urban classification: CCGs scored 3 if ≥50% of the resident population live in rural areas/rural-related hub towns. A score of 2 was given if 26-49% of the resident population live in urban with significant rural areas. A score of one was given if ≥74% of the resident population live in predominantly urban areas.

3 of the lifestyle risk factor indicators are reported by local authority, not CCG. In the South West, the lower tier authority districts do not map directly to the CCG footprints. Therefore, when calculating the data for South Devon and Torbay CCG, the districts of Teignmouth and South Hams (which are split across the 2 CCG boundaries in Devon)

were grouped together with Torbay to provide an estimated score. This is the case for the following indicators:

- the percentage of physically inactive adults (<30mins/week)
- admission episodes for alcohol-related conditions

In addition, NHS Health Checks data is only reported at upper tier local authority level (Devon, Plymouth and Torbay). Therefore, Torbay data alone are used to represent the situation in South Devon and Torbay CCG. As with the other 2 local authority level indicators discussed above, the picture in South Devon and Torbay CCG may be slightly underestimated, and possibly overestimated in Northern, Eastern and Western Devon CCG.

The quality of the data for the kidney disease pathway were poorer than for the other pathways: 2 indicators report data from 2014, 2 of the indicators were retired from QOF in 2014/15 and the remaining 2 are only up-to-date as of 2015/16. Although most of this pathway has been weighted as low priority due to the poor data reliability, it is recognised that increased awareness of acute kidney injury is partly accountable for poor data recording as well as failure to identify CVD in chronic kidney disease patients.

3.4 Case studies

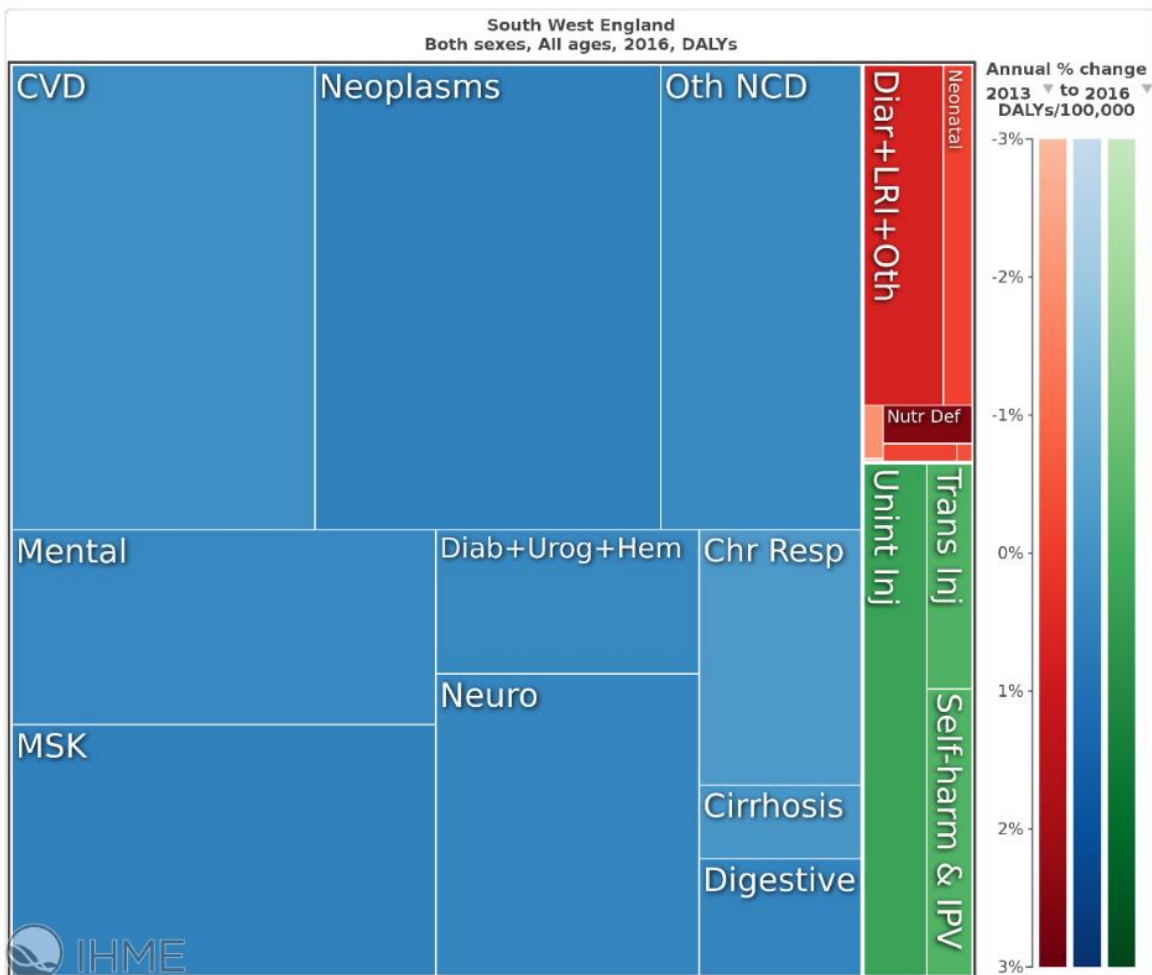
Throughout the report, short case studies have been included to highlight some of the effective interventions that have been implemented in different parts of England to prevent CVD. In the South West there are a range of interventions already in place to tackle CVD and increase its prevention. These are summarised in Appendix 3. Where an organisation is not listed in the appendix, the data has not yet been collected as part of the South West CVD Prevention engagement work.

4. The issue

4.1 Overview

The Global Burden of Disease Study shows that from 2013 to 2016 there has been an increasing annual trend in all-age disability-adjusted life years (DALYs) in both sexes attributed to CVD conditions in South West England (see Figure 3). In 2016, CVD was the second highest contributor to DALYs in South West England at 16.1% (neoplasms were highest at 18.3%), with 239,687 people living with CVD disease and disability ¹⁴

Figure 3: Causes of disability-adjusted life years (DALYs) in South West England, based on data from the Global Burden of Disease Study 2016



¹⁴ Global Burden of Disease 2016: <http://ghdx.healthdata.org/gbd-results-tool>

Between 2014 and 2016, 26.5% of all-age mortality, and 21.0% of premature mortality (<75 years) in the South West were caused by CVD.¹⁵ Deaths from CVD by gender show that men are bearing the greater burden with 27.5% of all-age deaths and 24.3% of premature deaths, compared to 25.6% of all-age deaths and 16.0% of premature deaths in women. Of all-age CVD deaths in the South West, CHD and stroke account for the greatest proportion at 42.2% and 27.5%, respectively. Similarly, of premature deaths in the South West, CHD accounts for 52.2% and stroke accounts for 19.0%. There is a strong correlation between deprivation and mortality from CHD and stroke in the South West, as elsewhere in England; despite, on average, a lower level of deprivation for the region, there are pockets of high deprivation.

In the South West, the prevalence of coronary heart disease (3.5%; England: 3.2%, range: 2.0%-4.3%), stroke/TIA (2.2%; England: 1.7%, range: 1.1%-2.2%), hypertension (14.8%; England: 13.8%, range: 11.1%-15.7%), AF (2.4%; England: 1.8%, range: 1.1%-2.4%) heart failure (0.9%; England: 0.8%, range: 0.5%-1.1%) and peripheral arterial disease (0.7%; England: 0.6%, range: 0.3%-0.9%) are all higher than the England averages. In particular, the prevalence of stroke/TIA, hypertension and AF are significantly higher than the England averages.¹⁶ A high prevalence of hypertension and AF is not unsurprising in the South West given the large proportion of the population aged 65 and above. In 2017, the NHS England South (South West) footprint had the greatest proportion of people in England aged 65 and over at 21.3%.¹⁷

Based on data from 2016/17 (see Appendix 5), the diagnosed to estimated prevalence of hypertension in the South West ranges from 55% to 61% across the 12 CCGs, compared to the England average of 59%. The diagnosed to estimated prevalence of AF in the South West ranges from 77% to 88% across the 12 CCGs, compared to the England average of 76%. A South regional analysis by STP is also available in Appendix 5 and reviews the proportion of people diagnosed and controlled for hypertension and the diagnosed to estimated prevalence of AF, as well as the additional proportion of patients that need to be treated for high cholesterol to achieve the 75th percentile of general practices. Please note that this analysis uses data from 2015/16.

¹⁵ ONS Nomis: https://www.nomisweb.co.uk/home/release_group.asp?g=23

¹⁶ BHF Statistics: <https://www.bhf.org.uk/research/heart-statistics/heart-statistics-publications/cardiovascular-disease-statistics-2018>

¹⁷ PHE National GP Profiles: <https://fingertips.phe.org.uk/profile/general-practice/data#page/3/gid/2000005/pat/15/par/E92000001/ati/46/are/E39000039/iid/336/age/27/sex/4>

Case study

In Dudley, practice-based pharmacists worked with GP practices to identify patients with undiagnosed or sub-optimally managed hypertension, as part of a wider blood pressure strategy. Using the EMIS search and report system, practice-based pharmacists identified 11,000 hypertensives who were not treated to target and diagnosed 1,096 new hypertensives. Source: PHE (2016) Menu of Preventative Interventions.

The 'Size of the Prize' resources developed by NHS England and PHE show that there are considerable gaps in disease early identification in people with potentially undiagnosed hypertension and AF.¹⁸ In addition, the gap identifies cholesterol as a key risk factor for heart attack, which currently affects more than half of the adults in the UK (identified as cholesterol levels over >5mmol/L). See Table 1 below.

Table 1: The size of the CVD diagnosis and treatment gap in primary care in the South West

The diagnosis and treatment gap in the South West (2015/16)		Total
High BP	Estimated adult population with hypertension	1,412,600
	Estimated undiagnosed adult population with hypertension	582,100
	GP-registered hypertensives not treated to 150/90mmHg target	176,200
AF	GP-registered population with AF	124,000
	Estimated GP-registered population with undiagnosed AF	41,400
	GP-registered high-risk AF patients (CHA2DS2VASc \geq2) not anticoagulated	20,900
CVD risk	Estimated adult population 30 to 85 years with 10 year CVD risk >20%	409,500
	Estimated % of people with CVD risk \geq20% treated with statins	49%

¹⁸ Size of the Prize: https://www.healthcheck.nhs.uk/commissioners_and_providers/data/size_of_the_prize_and_nhs_health_check_factsheet/

4.2 South West CCGs with the largest CVD gaps

The list below and Table 2 show the ranking of South West CCGs according to their cumulative weighted score from the gap analysis highlighting the areas that need targeted CVD preventative interventions (1 = highest priority; 12 = lowest priority):

- | | |
|--|----------------------------------|
| 1. Kernow | 7. Swindon |
| 2. South Devon and Torbay | 8. Gloucestershire |
| 3. Bristol | 9. North Somerset |
| 4. Somerset | 10. Wiltshire |
| 5. Northern, Eastern and Western Devon | 11. Bath and North East Somerset |
| 6. Dorset | 12. South Gloucestershire |

Table 2: The table below stratifies the ranks of each CCG by theme and total (1 = highest priority to 12 = lowest priority; where CCGs are ranked the same within a theme the cumulative score was the same)

Theme	North Somerset	Bristol	South Gloucs	Kernow	NEW Devon	S Devon & Torbay	Somerset	Gloucs	B&NES	Swindon	Wiltshire	Dorset
Demographics	6	2	9	1	4	4	3	6	7	10	5	8
Lifestyle risk factors	6	4	9	1	3	2	7	5	10	3	10	8
Heart	12	1	9	2	8	5	3	11	7	6	10	4
Stroke	7	8	11	1	4	2	5	6	12	9	10	3
Kidney*	4	2	5	3	3	1	3	4	4	2	4	3
Diabetes	12	4	9	2	6	5	3	7	11	1	8	10
Total	9	3	12	1	5	2	4	8	11	7	10	6

* As described in section 3.3, the data for the kidney pathway indicators was poorer than for the others and is less reliable.

4.3 Variation and health inequalities

The gap analysis highlights the demographic variation between the larger CCG geographies and acknowledges that considerable variation also exists within each of these areas. Kernow CCG has the highest ranking for the demographics theme, followed by Bristol and Somerset. Both Kernow and Bristol CCGs have the highest relative socioeconomic deprivation in the South West, with 5.2% and 16.0% of their respective LSOAs in the most deprived decile in England.¹⁹

¹⁹ English Indices of Deprivation 2015: <https://www.gov.uk/government/statistics/english-indices-of-deprivation-2015>

In addition, Kernow and Somerset both have large populations aged 65 and above, with $\geq 50\%$ of the resident population living in rural areas. In contrast, Bristol has the highest proportion of BAME population of the South West CCGs.

South Gloucestershire and Swindon have the lowest rankings in the demographics theme. As with Kernow and Somerset, South Gloucestershire has $\geq 50\%$ of the resident population living in rural areas, but unlike Kernow and Somerset it has low relative socioeconomic deprivation, with none of its LSOAs in the most deprived decile in England. Swindon CCG is ranked 151 out of 209 CCGs for deprivation and, therefore, has relatively low deprivation overall. Swindon CCG does have the second highest proportion of BAME population in the South West at 10.0%, but this is significantly lower than the England average of 14.6%.

4.4 Lifestyle risk factors

Analysis of the lifestyle risk factors theme included the following indicators: smoking prevalence, obesity prevalence, physical inactivity, alcohol-related admissions and people receiving an NHS Health Check between Q1 2013/14 and Q4 2017/18. The results find that Kernow and South Devon and Torbay CCGs have the greatest gaps when compared to the England benchmarks. Both CCGs have the highest weighted scores for people receiving an NHS Health Check and obesity prevalence. Furthermore, both are amber for smoking prevalence and alcohol-related admissions.

In contrast, Wiltshire, B&NES and South Gloucestershire CCGs have the smallest gaps when compared to the England benchmarks. B&NES and Wiltshire have the lowest weighted scores for all indicators, and South Gloucestershire has 4 out of 5, falling down on alcohol related admissions.

Only 21.8% of the eligible population in Cornwall have been invited for their NHS Health Check between Q1 2013/14 and Q4 2017/18, compared to 61.5% in B&NES. This greatly reduces the opportunities for early CVD identification and intervention. Although the diagnosed to estimated prevalence of hypertension in Kernow and B&NES is almost identical (58.2% and 57.5% respectively), the potential number of people with undiagnosed hypertension is very different – approximately 63,700 in Kernow compared to 19,150 in B&NES.²⁰

²⁰ The 2016 hypertension prevalence estimates were developed using data from the following: Health Survey for England; Health and Social Care Information Centre for population estimates at practice level; Neighbourhood Statistics for level of educational attainment, employment status, and limiting long lasting illness; Office for National Statistics for ethnicity and Department of Communities and Local Government for Index of Multiple Deprivation. See: <https://www.gov.uk/government/publications/hypertension-prevalence-estimates-for-local-populations>

4.5 Heart disease pathway

Analysis of the heart disease theme shows that Bristol CCG is ranked as the highest priority, followed by Kernow CCG. Both Bristol and Kernow have the highest weighted scores for reported to estimated prevalence of hypertension and for the QOF indicator HYP006: BP \leq 150/90mmHg in people with hypertension. North Somerset and Gloucestershire have the best rankings compared to the England benchmarks.

Despite this, Gloucestershire also has the highest weighted score for reported to estimated prevalence of hypertension. North Somerset, on the other hand, has the highest weighted score for HYP006: BP \leq 150/90mmHg in people with hypertension.

Case study

A recent primary care audit conducted in 2017 by Gloucestershire CCG focused on the diagnosis and management of hypertension. Of the total 88,545 (14%) patients diagnosed with hypertension in Gloucestershire, 70% were treated to the QOF target of 150/90mmHg and 50% were treated to the NICE target of 140/90mmHg. The audit also found that only 52% of diagnosed hypertensives had a QRISK score calculated, with only 11% of those with a QRISK score \geq 20% currently on a statin. Source: Gloucestershire CCG.

All 12 CCGs are amber for the heart disease management indicators CHD002: Last BP reading in last 12 months is \leq 150/90mmHg and HF003: Heart failure with left ventricular dysfunction (LVD) treated with ACE inhibitors (ACE-I) or angiotensin receptor blockers (ARB). Furthermore, 11 CCGs are amber and Somerset CCG is high priority for CVD-PP001: new hypertension patients aged 30-74 with CV risk assessment \geq 20% treated with statins. These results show that management of hypertension and heart disease across the South West can be improved.

4.6 Stroke pathway

The highest priority CCGs within the stroke theme are Kernow, South Devon and Torbay and Dorset. All 3 of these CCGs have the highest weighted scores for stroke prevalence, STIA003: management of blood pressure \leq 150/90mmHg in people with a history of stroke or transient ischemic attack (TIA), and non-elective spend per 1000 age/sex weighted population. Dorset CCG has the highest weighted score for AF007: in those patients with atrial fibrillation whose latest record of a CHADS₂DS₂-VASc score is greater than or equal to 2, the percentage of patients who are currently treated with anti-coagulation therapy.

B&NES, South Gloucestershire and Wiltshire have the lowest priority ranking in the stroke pathway, although Wiltshire CCG has an indicator with the highest weighted score for stroke prevalence.

All CCGs were either red or amber for STIA003: management of blood pressure $\leq 150/90$ mmHg in people with a history of stroke or TIA, and all but Bristol CCG, which was green, were amber for stroke mortality in people aged 75+.

Case study

In Leicester City CCG during April to June 2014, 23% of patients admitted to hospital with a stroke had known AF. Of these, only 38% were on anticoagulation. By 2015, prescription of anticoagulants for known AF patients rose to 82.6%; opportunistic screening identified 138 AF patients; 37 strokes were prevented; and estimated prevention savings of £499K were achieved. Source: PHE (2016) Menu of Preventative Interventions.

Variation in CVD-related mortality can be identified when reviewing the excess deaths between the most and least deprived quintiles in Cornwall in 2012-14: 182 in men and 147 in women with 24.0% in men and 26.5% in women attributable to circulatory causes, including CHD and stroke.²¹ This contrasts to the excess deaths in B&NES (39 in men and 7 in women), of which 19.0% in men and 12.9% in women were attributable to circulatory causes. In Cornwall, if the most deprived quintile had the same mortality rate for circulatory causes as the least deprived, men would gain 1.3 years of life and women would gain 1.0 year of life.

4.7 Kidney disease pathway

As previously mentioned, the quality of the data for the kidney disease pathway were poorer than for the other pathways. As a result, the weighted scores for the CCGs were largely similar and therefore the ranking only ranges from 1-5.

Bearing in mind the caveat above, South Devon and Torbay CCG has the highest ranking and is amber for reported to estimated prevalence of CKD and non-elective spend per 1000 age/sex weighted population, followed closely by Bristol and Swindon CCGs. South Gloucestershire has the lowest ranking in the pathway but is amber for reported to estimated prevalence of CKD.

4.8 Diabetes pathway

Swindon and Kernow are the high priority CCGs in the diabetes pathway. Both are red for total non-elective spend per 1000 population. In Swindon, all other indicators are amber. Kernow has a lower than England average prevalence of diabetes and is therefore green for this indicator. However, this may be the result of underdiagnosis. All other indicators in Kernow are amber.

²¹ PHE Segment Tool: <https://fingertips.phe.org.uk/profile/segment>

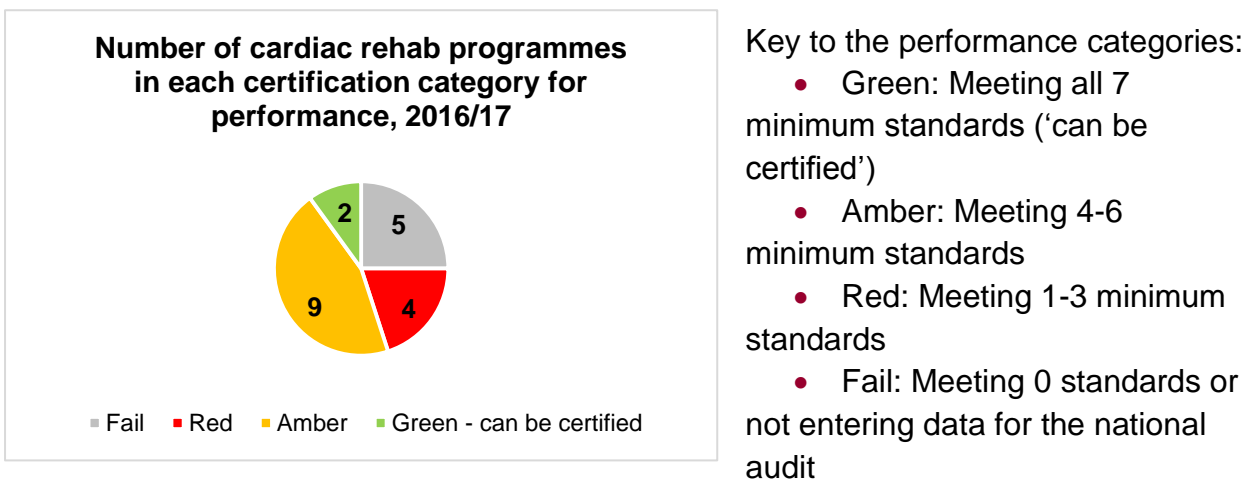
In contrast, B&NES and North Somerset are low priority in the diabetes pathway. It is worth noting that all 12 CCGs have at least 2 amber indicators for the 3 diabetes treatment targets: cholesterol <5mmol/l, HbA1c is <59mmol/mol and blood pressure ≤140/80. These indicators are being targeted for improvement by the NHS England South West Cardiovascular Clinical Network, who have recently brought together a cohort of GP Clinical Champions, at least one drawn from each CCG area in the South West to address the shortcomings in these targets.

4.9 Cardiac rehabilitation

The data from PHE Fingertips and NHS RightCare does not include indicators surrounding cardiac rehabilitation for patients recovering from surgery, a procedure or heart attack. This is an important element of tertiary prevention on the heart disease pathway. The availability of which is subject to considerable variation across the country in terms of access and quality, as outlined in the National Audit of Cardiac Rehabilitation (NACR) conducted annually by the British Heart Foundation and the British Association for Cardiovascular Prevention and Rehabilitation.²² Cardiac rehabilitation is strongly recommended by NICE in Clinical Guideline 172, which states ‘All patients (regardless of their age) should be given advice about and offered a cardiac rehabilitation programme with an exercise component’. NICE, after reviewing the evidence, are confident that cardiac rehabilitation does more good than harm and is cost effective.²³

PHE South West have recently completed a report analysing the 2016/17 NACR data for a range of indicators to identify gaps in care, quality and outcomes for patients across the 20 cardiac rehabilitation programmes in the South West.

Figure 4: Number of cardiac rehab programmes in each certification category for performance, 2016/17



²² The National Audit of Cardiac Rehabilitation: <https://www.bhf.org.uk/publications/statistics/national-audit-of-cardiac-rehabilitation-annual-statistical-report-2017>

²³ NICE CG172 Myocardial infarction: cardiac rehabilitation and prevention of further cardiovascular disease: <https://www.nice.org.uk/guidance/cg172>

The review has identified a wide degree of variation across all indicators. For example, as Figure 4 above shows, only 2 programmes in the South West are achieving the 7 national minimum standards required for service certification (see Appendix 6).

Variation was also notable in the following:

- on average, between 40% and 54% of eligible patients aged <65, and between 39% and 72% of eligible patients aged 65+ in the 4 priority groups²⁴ are not being referred for cardiac rehabilitation
- 49% of all early referrals are not timely ≤3 days
- on average, uptake of cardiac rehabilitation in each of the 4 priority groups is below the 65% target in the Department of Health's Cardiovascular Disease Outcomes Strategy 2013²⁵
- data is missing for 2 commissioned cardiac rehabilitation programmes that are not registered with NACR

4.10 NHS Health Checks

As Figure 5 shows, of the 16 upper tier local authorities in the South West that commission NHS Health Checks for their eligible population, 4 have a received rate that is greater than the England average of 44.3% and the remaining 12 have a received rate below the England average. The average received rate for the eligible population of the South West is 34.9%, with a range of 21.6% in Cornwall to 61.5% in Bath and North East Somerset (the Isles of Scilly has a received rate of 76.8% but a very small eligible population of <1,000, so is not an ideal comparator for other parts of the South West).

The growing evidence base highlights the impact of NHS Health Checks in preventing CVD conditions through the early identification of risk factors, such as hypertension, type 2 diabetes and familial hypercholesterolemia (see Figure 6 below). It has also been successful at reaching beyond the 'worried well' as people from poorer communities and high risk ethnic minority groups are more likely to have had a check.²⁶

²⁴ Priority groups in cardiac rehab analysis: MI – myocardial infarction; MI/PCI – MI/percutaneous coronary intervention; PCI; CABG – coronary artery bypass graft

²⁵ DoH Cardiovascular Disease Outcomes Strategy 2013:

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/217118/9387-2900853-CVD-Outcomes_web1.pdf

²⁶ Emerging evidence on the NHS Health Check (2017):


https://www.healthcheck.nhs.uk/latest_news/emerging_evidence_on_the_nhs_health_check_findings_and_recommendations/

Figure 5: People receiving an NHS Health Check in the South West between Q1 2013/14 and Q4 2017/18 (Source: PHE Fingertips)

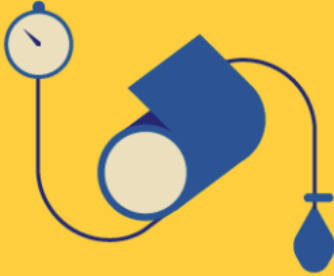
People receiving an NHS Health Check 2013/14 Q1 - 2017/18 Q4 Proportion - %

Area	Recent Trend	Count	Value	95% Lower CI	95% Upper CI
England	-	6,864,964	44.3	44.3	44.3
South West region	-	570,217	34.9*	-	-
Bath and North East Somer...	-	31,361	61.5	61.1	61.9
Bournemouth	-	12,425	23.5	23.1	23.9
Bristol	-	42,794	40.6	40.3	40.9
Cornwall	-	37,146	21.6	21.4	21.8
Devon	-	68,353	28.8	28.6	29.0
Dorset	-	35,977	28.3	28.0	28.5
Gloucestershire	-	73,841	38.8	38.6	39.1
Isles of Scilly	-	552	76.8	73.5	79.7
North Somerset	-	22,614	34.7	34.3	35.0
Plymouth	-	26,253	36.8	36.5	37.2
Poole	-	18,108	32.0	31.6	32.4
Somerset	-	51,427	30.3	30.1	30.6
South Gloucestershire	-	35,676	45.0	44.6	45.3
Swindon	-	25,880	40.1	39.8	40.5
Torbay	-	16,725	40.4	39.9	40.8
Wiltshire	-	71,085	47.1	46.9	47.4


Figure 6: The impact of the NHS Health Check (Source: PHE)


Public Health England
Healthmatters


Impact of the NHS Health Check



**For every 30 to 40
NHS Health Checks
1 person is diagnosed
with hypertension**



**For every 80 – 200
NHS Health Checks
1 person is diagnosed
with type 2 diabetes**



**For every 6 to 10
NHS Health Checks
1 person is identified
as being at high risk
of CVD**

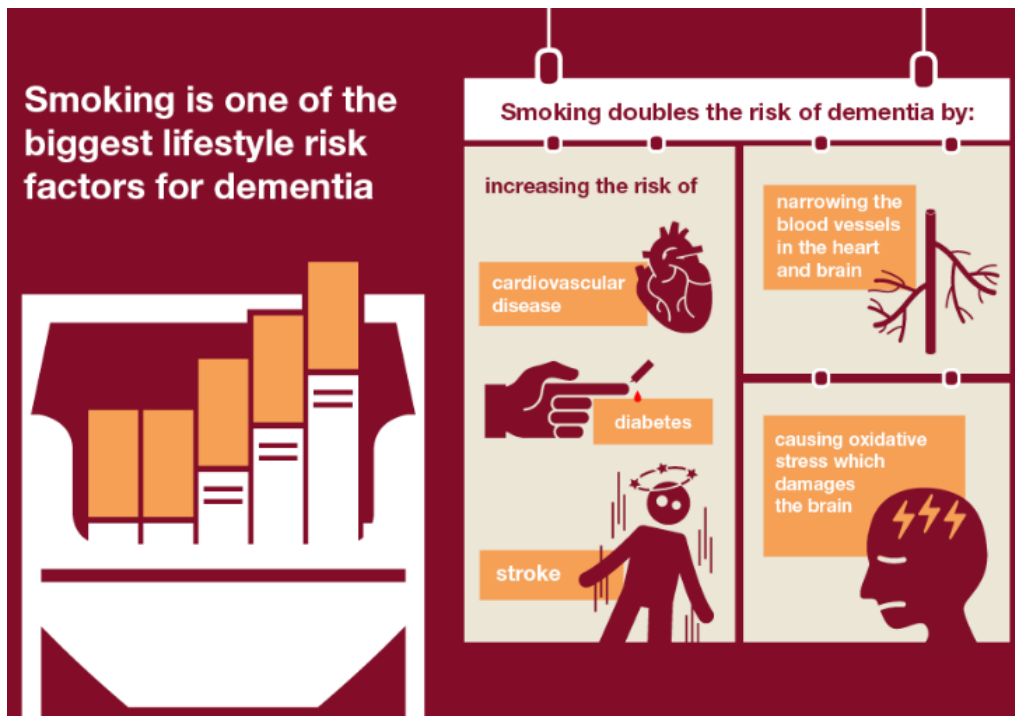
4.11 CVD and mental health

4.11.1 Vascular dementia

Vascular dementia is the second most common type of dementia behind Alzheimer’s disease, affecting approximately 150,000 people in the UK. Increasingly, evidence is showing that cases of dementia are a mix of Alzheimer’s disease and vascular dementia. As vascular dementia shares the same risk factors as CVD and stroke, the same preventative measures can help to reduce dementia risk: ‘what’s good for the heart is good for the brain’. See Figure 7.

In 2016, the PHE South regional team reviewed the methodology used for estimating dementia prevalence at CCG-level, which is a key component for calculating dementia diagnosis rates (DDR).²⁷ NHS England South was found to be the lowest performing region in the country at 62.3% (only 9 of 60 CCGs achieved the standard of 66.7%). The review found that the estimated prevalence of dementia used in the calculations was only based on age and sex variations without consideration of the local health profiles and prevalence of risk factors within CCG areas.

Figure 7: Smoking and lifestyle risk factors for dementia (Source: PHE)

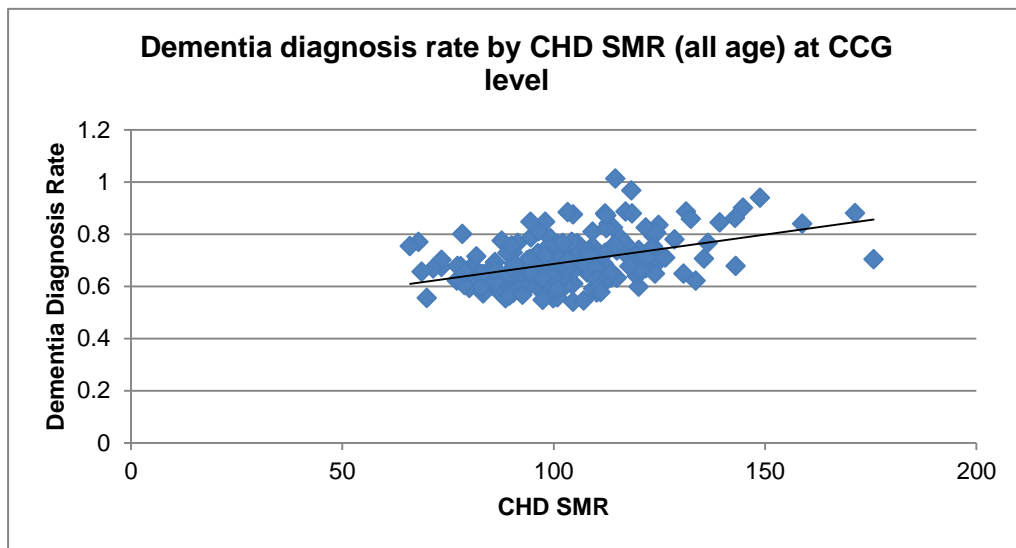


²⁷ Sammer Tang and James Mapstone (2016) CCG Level Dementia Diagnosis Rate (DDR). Not published. PHE South.

There is good evidence outlining the association between the risk factors for cardiovascular disease (CVD) and an increased risk of dementia, and for this reason the DDR may be lower in areas that have a healthier population due to overestimating the prevalence of dementia within that population.

The review aimed to determine the degree to which all-age coronary heart disease standardised mortality ratios (CHD SMR) and care home population densities may explain some of the variation seen in the DDRs. The model developed showed that 24% of the variation seen in DDR between CCGs was due to CHD SMR and care home population density combined (separately: 19.8% CHD SMR; 5.8% care home population density).

Figure 8: Dementia diagnosis rate by coronary heart disease (CHD) standardised mortality ratio (all age) at CCG level



The univariate association in Figure 8 shows that as CHD SMR increases, so too does the DDR. This supports the evidence that CVD risk factors are associated with dementia. It also suggests that the presence of higher rates of CVD risk factors in a population overinflates the DDR as the estimated prevalence of dementia, upon which the DDR is based, has been underestimated. The reverse effect is seen with care homes.

When using this model to recalculate the regional rates, the South still has the lowest DDR, although this is higher at 65.5%. The review surmises that the reason for the low DDR across the South is likely a combination of 2 factors: 1) residual confounding due to using measures that are not adequately capturing low risk factor rates for dementia in the South; and 2) that the DDR is a true measure of quality and a greater focus is needed to increase dementia diagnosis rates.

4.11.2 Severe mental illness

People with severe mental illness have an increased risk of poor physical health largely due to preventable physical illnesses predominantly caused by smoking. Life expectancy for this cohort is reduced by, on average, 15-20 years, with two-thirds of these deaths from avoidable physical illnesses including heart disease and cancer.

To support improvements in the quality of services and the creation of new, improved patterns of care for this cohort, NHS England has introduced a national Commissioning for Quality and Innovation (CQUIN) indicator to ensure that patients with psychoses are assessed and treated for cardiometabolic risk factors.²⁸

4.12 Out-of-hospital cardiac arrest

Every year in the UK approximately 30,000 people receive resuscitation for out-of-hospital cardiac arrests (OHCA), with only 1 in 20 surviving the OHCA to go home from hospital. In some areas, people are 2 to 3 times more likely to survive than in others. Research currently being led by Warwick University, with funding from BHF and the Resuscitation Council UK, aims to understand the differences in survival following an OHCA.²⁹

Data from the South Western Ambulance Service Trust shows that in the 12 months from November 2016 to October 2017, return of spontaneous circulation³⁰ ranged from 22% to 33%, compared to 25% to 32% in England. Furthermore, the cardiac arrest survival rates³¹ for the same period of time ranged from 6% to 12%, compared to 7% to 12% in England. It should be noted that these data only reflect patients attended by an ambulance crew who attempted resuscitation, so the number of patients not attended to by an ambulance is not known.³²

4.13 The role of community pharmacy

In the South West there are 7 Local Pharmaceutical Committees (LPCs) representing the views and interests of their local community pharmacies. As a result of the different

²⁸ CQUIN Indicator Specification Information on CQUIN 2017/18 - 2018/19: <https://www.england.nhs.uk/wp-content/uploads/2018/05/cquin-indicator-specification-information-april-2018.pdf>

²⁹ Warwick University OHCA Outcomes: <https://warwick.ac.uk/fac/med/research/ctu/trials/ohcao/>

³⁰ This is a measure of the number of patients who have suffered a cardiac arrest, but as a result of life-support started or continued by the ambulance service, had a pulse again by the time they arrived at hospital. See: <http://www.ambulancstats.co.uk/presentation.php#5>

³¹ This is a measure of the overall number of patients suffering a cardiac arrest, but as a result of life-support started or continued by the ambulance service, and treatment in hospital, they were successfully resuscitated and survived. See: <http://www.ambulancstats.co.uk/presentation.php#7>

³² Communication between BHF and NCVIN: Andrew Hughes, 14 February 2018

oversight mechanisms there is variation across each of the LPC geographies in terms of what services are provided in the community. Approximately 80-85% of community pharmacies in the South West have Level 1 Healthy Living Pharmacy (HLP) accreditation, with a role in promoting and signposting to a wide range of local health promotion services. All areas offer smoking cessation advice and support. 5 of the LPC areas offer NHS Health Checks, but for most this is a limited service offered in a specified number of their pharmacies, creating local variation within LPC areas. Only 1 or 2 areas offered the following: alcohol brief intervention service; diabetes patient activation measures; referral in to the National Diabetes Prevention Programme; and referral to Health Trainers.

In February and March 2018, pharmacies in the NHS England South (South West) region were asked to increase the public awareness of heart health and reduce the risk of heart attack and stroke by encouraging adults to complete PHE's online One You Heart Age Tool and get a free blood pressure reading. A pharmacy participation rate of 94% (592 of 628 pharmacies) was achieved. During the 2 month pilot, a total of 8,822 conversations about the Heart Age Tool were recorded, with 771 patients directly referred to their GPs as a result of the tool being completed. The findings of the pilot showed that, when compared to the non-pilot pharmacies in the South West, the pilot pharmacies in the South West maintained interest and attracted new interest to the Heart Age Tool during and after the pilot phase.³³

³³ PHE South West Pharmacy Public Health Campaign Evaluation – February to March 2018. Not published.

5. Recommendations for action

The recommendations put forward below have been agreed by the members of the South West CVD Prevention Board and aim to strengthen prevention initiatives across the CVD pathway, with a particular focus on early detection and management of CVD risk factors. The recommendations are for action across all providers of health care in 2018/19.

Primary prevention

1. To work through the health and wellbeing network in the South West and with NHS providers to address the high obesity prevalence.
2. To develop a South West targeted campaign in collaboration with PHE Communications and Marketing teams to raise awareness of the scale and impact of CVD conditions in high risk areas and where to go for help and support. This will link in with the existing PHE One You campaign.

Secondary prevention

3. To improve the early detection and management of hypertension, atrial fibrillation and high cholesterol by working with CCGs and STPs to upscale prevention interventions.
4. To target CCGs and STPs with the highest need and offer practice-based solutions supporting health professionals across these pathways.

Tertiary prevention

5. To work with partners to identify and tackle variation in cardiac rehabilitation care in the South West to support all programmes to achieve at least 6 the 7 national minimum standards.

Appendix 1: Full list of indicators used in the analysis

Ref	Indicator	Level	Year	Source	Definition
1	Deprivation (IMD 2015)	CCG	2015	DCLG	Population weighted average of the combined ranks for the LSOAs in a larger area. This measure is calculated by averaging all of the LSOA ranks in each larger area after they have been population weighted. The 'average rank' scores for the larger areas are then ranked, where the rank of 1 (most deprived) is given to the area with the highest score. (For the purpose of calculating the score for the larger area, LSOAs are ranked such that the most deprived LSOA is given the rank of 32,844.). The nature of this measure – using all areas, and using ranks rather than scores – means that a highly polarised larger area would not tend to score highly, because extremely deprived and less deprived LSOAs will 'average out'. Conversely, a larger area that is more uniformly deprived will tend to score highly on the measure. CCGs scored 3 if ranked 1-70 (more deprived); 2 if ranked 71-140; and 1 if ranked 141-209 (less deprived).
2	Population aged 65+	CCG	2017	Fingertips	Proportion of the population (in percent) aged 65 years or over. Value type: proportion.
3	Dementia: recorded prevalence (aged 65+)	CCG	2017	Fingertips	The percentage of patients (aged 65+) with dementia as recorded on all open and active GP practice disease registers. Value type: proportion.
4	Rural-urban classification	LA	2011	DEFRA	CCGs scored 3 if ≥50% of the resident population live in rural areas/rural-related hub towns. A score of 2 was given if 26-49% of the resident population live in urban with significant rural areas. A score of 1 was given if ≥74% of the resident population live in predominantly urban areas.
5	% BAME ethnicity	CCG	2011	PHE	England average = 14.6%. The confidence intervals for the value in each CCG were compared to those for England in order to determine the significance of the score.
6	Smoking prevalence (QOF)	CCG	2016/17	Fingertips	Denominator of SMOK004 (= Number of patients (15+) who are recorded as current smokers) divided by the estimated number of patients (15+), in percent. Value type: crude rate.

7	Obesity prevalence (QOF)	CCG	2016/17	Fingertips	Percentage of patients aged 18 and over with a BMI greater than or equal to 30 in the previous 12 months, as recorded on practice disease registers. The denominator is patients aged 18 and over taken from the Prescription Pricing Division practice populations.
8	% physically inactive adults (<30mins/week)	LA	2016/17	Fingertips	The number of respondents aged 19 and over, with valid responses to questions on physical activity, doing less than 30 moderate intensity equivalent (MIE) minutes physical activity per week in bouts of 10 minutes or more in the previous 28 days expressed as a percentage of the total number of respondents aged 19 and over.
9	People receiving NHS HC per year	LA	2013/14-2017/18	NHS Health Checks	Percentage of the eligible population, aged 40 – 74 years, receiving an NHS Health Check in the financial year. As the Health Checks data are only available at upper tier/unitary authority level, only Torbay is included under the South Devon and Torbay CCG entry. The parts of Teignbridge and South Hams districts that are covered by South Devon and Torbay CCG are reported under NEW Devon CCG for this indicator.
10	Admission episodes for alcohol-related conditions (Narrow) Persons, 2016/17	LA	2016/17	Fingertips	Admissions to hospital where the primary diagnosis is an alcohol-attributable code or a secondary diagnosis is an alcohol-attributable external cause code. Directly age standardised rate per 100,000 population (standardised to the European standard population).
11	Reported to estimated prevalence of hypertension	CCG	2016/17	NCVIN/QOF/BHF	Reported to estimated prevalence of hypertension (%) (QOF and NCVIN).
12	Reported to estimated prevalence of CHD	CCG	2015/16	RightCare	Reported to estimated prevalence of CHD (%) (QOF).
13	CVD-PP001: new HT patients aged 30-74 with CV risk assessment >=20% treated with statins	CCG	2016/17	Fingertips	In those patients with a new diagnosis of hypertension aged 30 or over and who have not attained the age of 75, recorded between the preceding 1 April to 31 March (excluding those with pre-existing CHD, diabetes, stroke and/or TIA), who have a recorded CVD risk assessment score (using an assessment tool agreed with the NHS CB) of ≥20% in the preceding 12 months: the percentage who are currently treated with statins, NICE 2011 menu ID: NM26. Value type: proportion.
14	HYP006: BP<=150/90mmHg in people with hypertension	CCG	2016/17	Fingertips	The percentage of patients with hypertension in whom the last blood pressure reading (measured in the previous 12 months) is 150/90 mmHg or less. Value type: proportion.
15	CHD002: Last BP reading in last 12 months is <=150/90	CCG	2016/17	Fingertips	The percentage of patients with coronary heart disease in whom the last blood pressure reading (measured in the previous 12 months) is

					150/90 mmHg or less. Value type: proportion.
16	CHD005: Record that aspirin, APT or ACT is taken	CCG	2016/17	Fingertips	The percentage of patients with coronary heart disease with a record in the previous 12 months that aspirin, an alternative anti-platelet therapy, or an anticoagulant is being taken. Value type: proportion.
17	HF002: Diagnosis confirmed by ECG/specialist assessment	CCG	2016/17	Fingertips	The percentage of patients with a diagnosis of heart failure (diagnosed after 1 April 2006) which has been confirmed by an echocardiogram or by specialist assessment 3 months before or 12 months after entering on to the register. Value type: proportion.
18	HF003: Heart failure with LVD treated with ACE-I or ARB	CCG	2016/17	Fingertips	The percentage of patients with a current diagnosis of heart failure due to left ventricular dysfunction (LVD) who are currently treated with ACE inhibitor or angiotensin receptor blocker (ARB). Value type: proportion.
19	CHD admissions (all ages)	CCG	2016/17	Fingertips	Trend of the rates of admissions to hospital for CHD per population (directly standardised rates) from 2003/04 to 2016/17, for all ages. Value type: directly standardised rate.
20	Heart failure admissions (all ages)	CCG	2016/17	Fingertips	Trend of the rates of admissions to hospital for heart failure per population (directly standardised rates) from 2003/04 to 2016/17, for all ages. Value type: directly standardised rate.
21	Proportion of HF deaths at home (or usual place of residence)	CCG	2015-16	Fingertips	Proportion of deaths at home (or usual place of residence) from heart failure. Value type: proportion.
22	CHD mortality rates <75	CCG	2014-16	Fingertips	Coronary heart disease mortality 3 year average rates, by sex, under 75 years (age standardised).
23	Non-elective spend	CCG	2015/16	RightCare	CHD - Total non-elective spend per 1000 population (SUS).
24	Reported to estimated prevalence of AF	CCG	2016/17	NCVIN/QOF/ Stroke Assoc.	Reported to estimated prevalence of atrial fibrillation (QOF and NCVIN). Value type: proportion.
25	Stroke prevalence (QOF)	CCG	2016/17	Fingertips	The percentage of patients with stroke or transient ischaemic attack (TIA), as recorded on practice disease registers (proportion of total list size). Value type: proportion.
26	STIA003: Last BP reading is <=150/90	CCG	2016/17	Fingertips	The percentage of patients with a history of stroke or TIA in whom the last blood pressure reading (last 12 months) is 150/90 mmHg or less. Value type: proportion.
27	STIA007: Record that an anti-platelet/anti-coagulant is taken	CCG	2016/17	Fingertips	The percentage of patients with a stroke shown to be non-haemorrhagic, or a history of TIA, who have a record in the preceding 12 months that an anti-platelet agent or an anti-coagulant is being taken. Value type: proportion.

28	AF007: Treated with anti-coagulation therapy (CHADS2DS2-VASc \geq 2)	CCG	2016/17	Fingertips	In those patients with atrial fibrillation whose latest record of a CHADS2DS2-VASc score is greater than or equal to 2, the percentage of patients who are currently treated with anti-coagulation therapy, NICE ID: NM82. Value type: proportion.
29	% who go direct to a stroke unit	CCG	2015/16	RightCare	The percentage of applicable patients who go direct to a stroke unit within 4 hours (SSNAP). Value type: proportion.
30	Patients 90% of time on stroke unit	CCG	2015/16	RightCare	The percentage of patients admitted to hospital following a stroke who spend 90% of their time on a stroke unit (SSNAP). Value type: proportion.
31	Non-elective spend	CCG	2015/16	RightCare	Cerebrovascular Disease - Total non-elective spend per 1000 age/sex weighted population (SUS)
32	% treated by early supported discharge team	CCG	Jan-Mar 2016	RightCare	The percentage of patients treated by a stroke skilled Early Supported Discharge team (SSNAP). Value type: proportion.
33	% patients returning home after treatment	CCG	2015/16	RightCare	The percentage of patients returning to usual place of residence following hospital treatment for stroke (HES). Value type: proportion.
34	Stroke all age admission trends	CCG	2016/17	Fingertips	Trend of the rates of admissions to hospital for stroke (ICD-10 I61, I63, I64) per population (directly standardised rates) from 2003/04 to 2016/17, for all ages.
35	Stroke mortality rates <75 (age-standardised)	CCG	2014-16	Fingertips	Stroke mortality rates, under 75 years (age standardised).
36	Stroke mortality rates 75+ (age-standardised)	CCG	2014-16	Fingertips	Stroke mortality rates, over 75 years (age standardised).
37	Reported to estimated prevalence of CKD	CCG	2015/16	RightCare	Reported to expected prevalence of CKD (%) (QOF). Value type: proportion.
38	CKD002 (retired): Last BP reading in last 12 months is \leq 140/85	CCG	2014/15	Fingertips	The percentage of patients on the CKD register in whom the last blood pressure reading, measured in the previous 12 months, is 140/85 mmHg or less (QOF - retired). Value type: proportion.
39	CKD003 (retired) % on CKD register with HT and proteinuria treated with ACE-I or ARB	CCG	2014/15	Fingertips	The percentage of patients on the CKD register with hypertension and proteinuria who are treated with ACE-I or ARB (QOF - retired). Value type: proportion.
40	Non-elective spend	CCG	2015/16	RightCare	Renal problems - Total non-elective spend per 1000 age/sex weighted population (SUS).
41	% home dialysis undertaken	CCG	2014	RightCare	The percentage of people receiving dialysis undertaking dialysis at home (UK Renal Registry). Value type: proportion.
42	% of patients on RRT who have a transplant	CCG	2014	RightCare	The percentage of patients on Renal Replacement Therapy who have a kidney transplant (UK Renal Registry). Value type: proportion.

43	Diabetes prevalence (QOF)	CCG	2016/17	Fingertips	The percentage of patients aged 17 years and over with diabetes mellitus, as recorded on practice disease registers (QOF). Value type: proportion.
44	DM004 % diabetes patients cholesterol <5mmol/l	CCG	2016/17	Fingertips	The percentage of diabetic patients whose last cholesterol was 5mmol or less (QOF). Value type: proportion.
45	DM007 % diabetes patients HbA1c is <59mmol/mol	CCG	2016/17	Fingertips	The percentage of patients with diabetes in whom the last IFCC-HbA1c is 59 mmol/mol or less (or equivalent test/reference range depending on local laboratory) in the preceding 12 months (QOF). Value type: proportion.
46	DM003 % patients' blood pressure <=140/80	CCG	2016/17	Fingertips	The percentage of diabetic patients whose last blood pressure was 140/80 or less (QOF). Value type: proportion.
47	DM012 % patients receiving foot examination	CCG	2016/17	Fingertips	The percentage of all diabetes patients receiving a foot examination (QOF). Value type: proportion.
48	DM014 % diabetes patients referred to structured education	CCG	2016/17	Fingertips	The percentage of patients newly diagnosed with diabetes, on the register, in the preceding 1 April to 31 March who have a record of being referred to a structured education programme within 9 months after entry on to the diabetes register (QOF). Value type: proportion.
49	Non-elective spend	CCG	2015/16	RightCare	Diabetes - Total non-elective spend per 1000 population (SUS).

Appendix 2: High priority themes identified in the gap analysis

CCG	Weighted score (higher score = more gaps in pathway)	Health inequalities				Gaps/areas of concern (not including demographics theme) Benchmarked against England average
		Rank of IMD 2015 average rank (out of 209 – least deprived)	Proportion of LSOAs in most deprived decile	Life expectancy years gained if most deprived quintile had same mortality as least deprived quintile for circulatory conditions (LA-level), 2012-14		
				Men	Women	
Kernow	260	62	5.2%	Cornwall: 1.30	Cornwall: 0.99	<p><u>Lifestyle risk factors</u> High obesity prevalence People receiving an NHS Health Check is low</p> <p><u>Heart</u> Poor reported to estimated hypertension prevalence Low proportion of people with diagnosed hypertension managed to ≤150/90mmHg</p> <p><u>Stroke</u> High prevalence of stroke Low proportion of people with a history of stroke/TIA whose BP is ≤150/90mmHg</p> <p>High non-elective spend</p> <p><u>Diabetes</u> High non-elective spend</p>
South Devon and Torbay	242	88	7.7%	Torbay: 1.00 Plymouth: 2.38	Torbay: 0.37 Plymouth: 0.94	<p><u>Lifestyle risk factors</u> High obesity prevalence People receiving an NHS Health Check is low</p> <p><u>Heart</u> Low proportion of people with diagnosed hypertension managed to ≤150/90mmHg</p> <p><u>Stroke</u> High prevalence of stroke Low proportion of people with a history of stroke/TIA whose BP is</p>

						<p>≤150/90mmHg High non-elective spend</p>
Bristol	239	66	16.0%	1.50	0.84	<p><u>Lifestyle risk factors</u> People receiving an NHS Health Check is low <u>Heart</u> Poor reported to estimated hypertension prevalence Low proportion of people with diagnosed hypertension managed to ≤150/90mmHg <u>Stroke</u> Low proportion of people with a history of stroke/TIA whose BP is ≤150/90mmHg <u>Diabetes</u> High non-elective spend</p>
Somerset	231	122	2.8%	1.32	0.54	<p><u>Lifestyle risk factors</u> People receiving an NHS Health Check is low <u>Heart</u> Low proportion of people with diagnosed hypertension managed to ≤150/90mmHg Low proportion of newly diagnosed hypertensives aged 30-74 with CVD risk of ≥20% treated with statins <u>Stroke</u> High prevalence of stroke Low proportion of people with a history of stroke/TIA whose BP is ≤150/90mmHg, or with a record that an anti-platelet/anti-coagulant is taken</p>
NEW Devon	222	110	5.9%	1.29	0.86	<p><u>Lifestyle risk factors</u> High obesity prevalence People receiving an NHS Health Check is low <u>Stroke</u> High prevalence of stroke Low proportion of people with a history of stroke/TIA whose BP is ≤150/90mmHg High non-elective spend</p>
Dorset	222	150	2.4%	Dorset: 1.10 Poole: 1.90 Bournemouth: 1.84	Dorset: 0.90 Poole: 1.20 Bournemouth: 1.21	<p><u>Lifestyle risk factors</u> People receiving an NHS Health Check is low <u>Heart</u> High non-elective spend</p>

						<p><u>Stroke</u> High prevalence of stroke Low proportion of people with a history of stroke/TIA whose BP is $\leq 150/90$mmHg Low proportion of people with AF and CHA2DS2-VASc score ≥ 2 treated with anti-coagulation therapy High non-elective spend</p>
Swindon	219	151	5.9%	1.42	0.96	<p><u>Lifestyle risk factors</u> High obesity prevalence People receiving an NHS Health Check is low <u>Stroke</u> No data available for proportion of people treated by early supported discharge team <u>Diabetes</u> High non-elective spend</p>
Gloucestershire	210	166	3.5%	1.48	1.50	<p><u>Lifestyle risk factors</u> High obesity prevalence People receiving an NHS Health Check is low <u>Heart</u> Poor reported to estimated hypertension prevalence <u>Stroke</u> High prevalence of stroke</p>
North Somerset	196	173	6.7%	1.76	1.12	<p><u>Lifestyle risk factors</u> People receiving an NHS Health Check is low <u>Heart</u> Low proportion of people with diagnosed hypertension managed to $\leq 150/90$mmHg <u>Stroke</u> High prevalence of stroke</p>
Wiltshire	190	175	0.4%	1.07	0.98	<p><u>Stroke</u> High prevalence of stroke</p>
B&NES	186	184	0.9%	1.13	0.42	<p><u>Heart</u> Poor reported to estimated hypertension prevalence</p>
South Gloucestershire	186	185	0.0%	0.87	0.68	<p><u>Heart</u> Low proportion of people with diagnosed hypertension managed to $\leq 150/90$mmHg</p>

Appendix 3: Current CVD prevention programmes and projects in the South West

<p>Public Health England – South West Centre</p>	<p>Healthcare Public Health</p> <p><u>CVD Prevention</u></p> <ul style="list-style-type: none"> • PHE have made a national commitment around CVD prevention in the Next Steps on the Five Year Forward View • Resource has been made available for a Programme Manager to lead on CVD prevention in every PHE Centre and an enhanced national team, including analytics, until 31 March 2019 • Key focus is on improving case finding and management of hypertension, atrial fibrillation (AF) and high cholesterol/CVD risk in primary care • In addition to national priorities, a SW CVD gap analysis looking at the entire CVD pathway has been developed and a review of cardiac rehabilitation services in the SW is underway • PHE SW Centre has established a SW CVD Prevention Board, and provides updates/reports to the national team through the CVD Prevention Network • PHE SW have developed relationships with key partners in the SW, South Region and nationally • PHE SW Centre are also committed to supporting local events and best practice sharing opportunities • PHE SW Centre and BHF are hosting 2 cardiac rehab events for the SW in October 2018 <p><u>Health and Justice Team</u></p> <ul style="list-style-type: none"> • NHS England commission Physical Health Checks for individuals in secure settings with the support of PHE – these have been in place for some time and over the last 12 months, further detailed work has been implemented to ensure the programme meets the needs of the population within those settings • NHS England and PHE Health and Justice Team are preparing a framework to further inform the work above alongside an audit of the Physical Health Checks • Health and Justice Team, with support from Health and Wellbeing, are also developing a pilot project that enhances the continuity of care for prisoners leaving a smokefree prison to ensure easy access to high quality smoking cessation support in the community, with a view to roll out a wider scheme across the SW <p>Health and Wellbeing</p> <p><u>NHS Health Checks</u></p> <ul style="list-style-type: none"> • PHE organise and chair the SW NHS Health Check Network 3 times a year for local authority commissioners – enables information sharing, support to address questions and concerns, self-assessment and audit opportunity to improve quality of
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	<p>programmes (STARS framework)</p> <ul style="list-style-type: none">• PHE collate and review quarterly Health Check data, challenging where performance is declining and encouraging expansion of the programme, and following up non-submission of data returns with local authorities• PHE provide a troubleshooting role and are closely linked with the national team <p><u>National Diabetes Prevention Programme (NDPP)</u></p> <ul style="list-style-type: none">• NDPP is an NHS England, PHE and Diabetes UK initiative• Most STP areas have been selected for inclusion in the national programme as part of the second wave of roll-out: Dorset did not bid and Devon was not chosen; Bristol and Somerset have been offered a digital package• Clinical Networks within NHS England have been particularly involved in the NDPP <p><u>Tobacco control</u></p> <ul style="list-style-type: none">• PHE lead and co-ordinate a SW Tobacco Control Network, working closely with local authorities and their tobacco control leads, and distribute a PHE SW Tobacco Control Bulletin• PHE work with local authorities to identify the local priority populations to deliver evidence based support to quit, eg promoting Tobacco Control Plan for England• PHE contribute to NHS sustainability by treating tobacco dependency, eg supporting Tobacco Control Plan Implementation Strategy• PHE support local authorities and NHS leadership to execute and maximise benefits from the implementation of the 'Risky Behaviours CQUIN' in Acute Trusts and Community/Mental Health Clinical settings; also support tobacco control in maternity and smokefree prisons• PHE are promoting a 'Tobacco Free NHS' through strategic communications and collaborative plans with relevant local stakeholders; also support Stoptober, Health Harms and other tobacco related campaigns <p><u>Alcohol misuse prevention</u></p> <ul style="list-style-type: none">• PHE supports local authorities primarily but does offer some support to NHS, with the bulk of support focused on treatment interventions/services commissioned by local authorities (sometimes jointly with CCGs and/or criminal justice agencies)• PHE carry out a regular survey to see the local composition of alcohol care teams (ACTs) based in hospitals• PHE also support Alcohol Identification and Brief Advice (IBA) and have adopted the 'Have a Word' approach developed by PH Wales. This is an IBA programme of training the trainers to cascade the knowledge and delivery of IBA to health and non-health agencies to address alcohol issues in the population, and have a range of electronic (presentations, workbooks and lesson plans) and physical (scratch cards/unit-calorie counters/unit measuring beakers/diaries) resources to support this training. It has been delivered to over 200 trainers so far. The One You digital platform also offers support on this• PHE have recommended IBA to STPs in the Menu of Preventative Interventions• PHE also support local authorities by providing data and processes around the Licensing Act 2003 to enable public health to make recommendations on licensing decisions which will have some preventative aspects• PHE are supporting the current national CQUIN focused on hospitals (Community and MH 2017 and Acute in 2018) delivering IBA to patients aimed at reducing alcohol problems and readmissions <p><u>Obesity prevention</u></p> <ul style="list-style-type: none">• PHE are working to encourage that the whole systems approach to obesity is adopted across the SW, including the
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Everybody Active Every Day Framework (Gloucestershire is currently piloting this)

- PHE are supporting Plymouth's Hot Food takeaway policy
- PHE have supported the Healthy Weight Declaration – 6 local authorities have signed up and are looking at how to combine learning from the National Whole Systems Obesity Programme; also developing declaration for NHS with funding from NHS England
- Sugar Smart – first draft of outline evaluation report produced, data collection now required
- PHE have developed One You rule of thumb on 400, 600, 600 calories when on the move
- Healthy Schools Conference in June 2018
- Continued programme of network events and bulletins, support for local areas

Physical activity

- PHE maintain and develop the SW Physical Activity Network
- PHE are promoting implementation of the Everybody active, every day: a framework to embed physical activity into daily life, which has 4 domains:
 - Creating Active Society (support delivery of One You and Change4Life campaigns)
 - Moving Professionals
 - GP Clinical Champion Programme - Improved Uptake
 - Focus on physical activity and social prescribing
 - Clinical Advice Pad Pilot in Cornwall (running Feb-July 2018)
 - Moving at Scale
 - Implementation of the Childhood Obesity Plan
 - Active 30/30
 - School Sports Premium
 - Focus on engaging girls and women
 - Active Environments
 - Accord with national parks
 - SW Local Nature Partnerships
 - Board – Devon Connecting Actively to Nature Project
 - Workshop on Active Design

Making Every Contact Count (MECC)

- PHE have a role of advocating for MECC and signposting to MECC Leads and Co-ordinators, and implementing the PHE MECC Strategy for the SW, 2017-2020
- Wessex model of MECC has been largely used in the SW developed by Health Education England (HEE)
- PHE have convened a SW MECC steering group that meets bimonthly (chaired by Wiltshire Council Consultant in PH) with local authority public health representation for each STP to agree how to use funding available from HEE – agreement reached to share money based on STP footprint (Dorset STP included under different HEE footprint)
- PHE are supporting Gloucestershire and Cornwall STPs, neither of which are rolling out the Wessex model
- PHE will also be assisting with the pilot of a shorter version of the Wessex HEE MECC training module in the SW – the training normally requires attendance at 2 half-day and one full-day session
- 4 of the SW STPs have used HEE funding to appoint MECC Co-ordinators (Cornwall, BSW, BNSSG and Devon)

- RAG-rated reports are sent to HEE by MECC Co-ordinators to update on developments of MECC roll-out and use of funds; oversight is provided by PHE

Health Protection

Air pollution

- The PHE Centre for Radiation, Chemicals and Environmental Hazards (CRCE) provide expert scientific advice and support to local authority public health teams and Environmental Health Officers (EHOs) at district council level
- PHE Health Protection Team supports this work at a local level with local authority public health & EHO teams
- PHE have established liaison group meetings at a local level to discuss air quality work
- PHE Health & Wellbeing Team supports air quality indirectly through promoting active travel and physical activity, and advising how planning and development can maximise active travel and minimise vehicle emissions
- PHE responds to nationally significant infrastructure project planning applications and responds to Environmental Permitting applications
- PHE have established a SW regional air quality network

Communications/Marketing

Communications

- National communications to support the new CVD prevention programme will be in the form of a blog written by Jamie Waterall, National CVD Prevention Lead for PHE
- SW CVD Prevention Programme Manager is working with Communications to develop messages to support the Heart Age Tool campaign and subsequent targeted uplift in September 2018

Marketing

- PHE are encouraging the use of the One You branded marketing resources to address risk factors – the Marketing Team are keen for STPs to commit to using the One You brand within their prevention plans
- PHE have supported social marketing research in Plymouth in relation to NHS Health Checks, looking at responses to invites on standard NHS branded letters, or using the One You branding
- PHE have rebranded and relaunched the One You Heart Age Tool, which was released in February 2018, and will be the key focus of PHE's CVD prevention communications and marketing campaign during September 2018
- PHE have also supported a pharmacy pilot of the Heart Age Tool in February and March 2018 in Cornwall, Devon, Somerset, Bristol, North Somerset and South Gloucestershire. The evaluation is now available
- PHE also led on a pharmacy uplift for Act F.A.S.T resources in May 2018. Pharmacies in the South displayed ACT F.A.S.T materials throughout May with counter staff promoting the materials. This is the first time the pharmacies ran the same campaign at the same time and it was supported by some national TV advertising. As a well-established campaign the focus was on testing the actual process of making it happen as well as the content. The objective was to raise awareness
- South Region have commissioned insight market research to support the South West and South East CVD Prevention Programmes, using focus groups to explore awareness of CVD risks and where to go for advice/information

<p>NHS England</p>	<ul style="list-style-type: none"> • Agreement between PHE, NHS England SW Cardiovascular Clinical Network and BHF to liaise once stroke plan released nationally as this will give the Clinical Network the mandate to work on AF and HT • NHS England commission NDPP and Health & Justice services, and are key to the smokefree NHS agenda • NHS England undertake specialised commissioning of cardiology services • NHS England is now consulting on proposals relating to the re-procurement of the NDPP Framework from November 2018. The NDPP is also exploring whether remote and digital technologies can be used to change behaviours. • NHS England have implemented the Preventing ill health CQUIN (2017-2019) for alcohol and tobacco brief interventions and advice in community, acute and mental health trusts • The SW Cardiovascular Clinical Network have just employed a cohort of diabetes GP Clinical Champions (at least one from every CCG in the South West) to lead on diabetes reviews with local practices
<p>NHS RightCare</p>	<ul style="list-style-type: none"> • RightCare are supporting local health economies to identify 'Where to Look, What to Change, How to Change' through their CCG 'Where to Look' and 'Focus' packs that review over and under-use of resources and variation (in relation to CVD: heart, stroke, renal and diabetes) • A South regional analytical team has been established in Reading and will be able to provide interpretative/analytical assistance re. RightCare tools, and possible support to PHE SW LKIS analyst • Cardiac rehab is not currently included in the RightCare benchmarking tools but could be added as a solution for poor secondary care outcomes • RightCare are currently drafting an AF high impact intervention document in collaboration with PHE, BHF and the Stroke Association
<p>Clinical Commissioning Groups</p>	<p>Gloucestershire CCG</p> <ul style="list-style-type: none"> • The CCG piloted and continue to use the tools from the 2015 'Don't Wait to Anticoagulate' project • The CCG completed a primary care audit in early 2018 focusing on hypertension, with data extracted from all 81 GP practice clinical systems for the period 01/01/17 – 31/12/17

- Presented findings of audit at workshop event in February 2018, during which delegates were split into groups to develop ideas for improving detection & management of hypertension and reducing CVD risk
- To support their work on preventing hypertension a bid has been submitted for a BHF Blood Pressure Award for 2018/19 – outcome due in August 2018
- The CCG have agreed to act as a ‘best practice’ case study for the South West
- The CCG are also reviewing their cardiac rehab pathway
- Gloucestershire CCG/GHNHSFT: new familial hypercholesterolaemia programme has been launched – supporting primary care roll-out (with support from BHF)

NEW Devon/South Devon and Torbay CCGs

- See Devon STP entry below

Kernow CCG

- An AF working group is underway with support from NHS RightCare to work with 10 practices in east Cornwall in the first instance
- Working group includes cardiologist from RCH
- Developing an AF community of practice
- The CCG are also working closely with the SWAHSN around the AliveCor device roll-out

Somerset CCG

- CVD prevention programme in Somerset is being developed with support from PHE, Somerset LA and SWAHSN

BNSSG CCG

- See BNSSG STP entry below

B&NES CCG

- Successful project in 2016 of pharmacist-led use of GRASP-AF tool. Resulted in increased prevalence of AF/heart flutter diagnoses, and reduction in proportion of high-risk AF patients not anticoagulated. The CCG run the GRASP tool every 6 months, and due to improved monitoring, diagnosis and management, it is estimated that 11 strokes are avoided every year
- CCG funds practice-based pharmacists to support medicines optimisation
- Currently developing a medicines optimisation approach to improving blood pressure management in people with diabetes using process mapping

Swindon CCG

- The CCG are rolling out the AliveCor devices to GP practices
- The CCG are also working closely with their new Diabetes GP Clinical Champion to focus on improvements to the management of diabetes in general practice – PHE have offered to support practice reviews, particularly focusing on blood pressure and cholesterol targets
- The medicines optimisation team are supporting the GP Clinical Champion by helping to identify those patients within target

	<p>practices that are not meeting the treatment targets</p> <p>Wiltshire CCG</p> <ul style="list-style-type: none"> The CCG will be reviewing their cardiac rehabilitation provision as a priority in 2018/19
<p>STPs/ICSSs</p>	<p>BNSSG STP – Healthier Together</p> <ul style="list-style-type: none"> Prevention plan developed with vascular risk factors (esp. hypertension, AF and raised cholesterol) as the priorities for the first year, clearly outlining that the STP will link in with the PHE SW CVD Prevention Programme The STP plan was launched at stakeholder engagement conference in June 2018 <p>Devon STP</p> <ul style="list-style-type: none"> The STP are developing a position statement paper for the long term conditions group to discuss what focus should be placed on hypertension and AF in their LTC plan PHE are linked in and have offered support, including the use of reports and materials recently generated
<p>British Heart Foundation</p>	<ul style="list-style-type: none"> New health service engagement team (established 18 months ago) with greater focus on secondary/tertiary prevention, although still strong advocates for primary prevention Work to develop communities of practice to redesign service pathways and identify inequalities and quality improvement programmes BHF have good links with the cardiac rehab teams across the SW, including national lead Regional work includes: <ul style="list-style-type: none"> PHE South – membership on South CVD prevention board PHE South West – supporting establishment of new SW CVD prevention board End of Life Care Network – support for palliative care and end stage heart failure SWAHSN/PHE – hosted roundtable discussion at Preventing AF-Related Strokes event in Exeter Work in Gloucestershire: <ul style="list-style-type: none"> CCG: reviewing cardiac rehab pathways CCG: supported secondary prevention workshop on hypertension and shared best practice CCG/GHNHSFT: familial hypercholesterolaemia programme that has been funded for 3 years by BHF (although funding has now ended) – supporting the FH nurse with primary care roll-out Work in Bristol: <ul style="list-style-type: none"> NBT: heart failure and cardiac rehab review – providing best practice UHBT: familial hypercholesterolaemia service - Alliance award nomination for FH clinical nurse specialist shortlisted for Leadership & Engagement award BHI: bid for Wave 2 Miles Frost Fund has been successful, so BHI will receive funding from BHF for Inherited Cardiac Conditions (otherwise known as Miles Frost Fund) Work in Wiltshire: <ul style="list-style-type: none"> CCG: members of CVD CPG providing advice re evidence base for cardiac rehab, palpitations and general Work in Somerset: <ul style="list-style-type: none"> CCG/LA/Provider Trusts: focus on heart failure to reduce admissions for HF out of hours. Members of strategic

	<ul style="list-style-type: none"> ○ group, sharing best practice and reviewing current pathway ○ CCG: NHS England AF 100 day challenge - Offered support re. evidence base/best practice and pathway review/redesign ○ STP: Richmond Group “Tapping the Potential” programme – Members of group, focus around community connections, social prescribing and STP support around any clinical services review ● Work in Cornwall: <ul style="list-style-type: none"> ○ Uni Exeter/Royal Cornwall Trust: supporting REACH-HF cardiac rehab programme for HF patients; research programme not-BHF funded ○ CCG/LA: members of LTC inc. CHD group, evidence base sharing, clinical representative identification, set up workshop for CHD patients/carers/HCPs to review current self-management and identify possible improvements ○ HealthWatch: End of life care - Review progress against End of Life Charter signed 2017 with NHS and other providers /commissioners ○ CCG/RightCare: Request from RightCare to support CCG CVD programme ● PHE and BHF are working together to deliver 2 cardiac rehab related events for clinicians, commissioners and patients across the South West in October 2018
<p>Academic Health Science Networks (AHSN)</p>	<p>West of England AHSN (Avon, Gloucestershire, Wiltshire and Swindon)</p> <ul style="list-style-type: none"> ● Currently rolling out 285 NHS England funded AliveCor devices to GP practices across patch (approx. one per practice) ● Supported the development of the Don’t Wait to Anticoagulate educational toolkit to move away from use of aspirin – worked with Bayer to upscale the toolkit across Gloucestershire as a pilot ● The toolkit and approach was then rolled out to Bristol <p>South West AHSN (Somerset, Devon and Cornwall)</p> <ul style="list-style-type: none"> ● In collaboration with PHE, SWAHSN hosted the ‘Preventing AF-Related Strokes’ event in Exeter in March 2018 ● Currently rolling out 250 NHS England funded AliveCor devices to GP practices ● Providing implementation support and training with the devices ● SWAHSN have an information analyst who has developed a practice level variation toolkit to support the identification of unwarranted variation in AF detection and management across GP practices – he has supported the targeted work underway in Cornwall, and the work that is getting underway in Devon
<p>Local authorities</p>	<p>Gloucestershire County Council</p> <ul style="list-style-type: none"> ● Commission Healthy Lifestyle Service Gloucestershire ● Behavioural support: <ul style="list-style-type: none"> ○ Losing Weight (5%) ○ Stop Smoking (4 week quit) ○ Physical Activity (150 minutes) ○ Alcohol (≤14 units) ○ Up to 12 weeks support ○ Meet in their local community ○ Motivational Interviewing focus

	<ul style="list-style-type: none">• Other support:<ul style="list-style-type: none">○ Self Care and Self Care with Support www.best-you.co.uk○ Tier 2 Weight Management on Referral <p>Wiltshire Council</p> <ul style="list-style-type: none">• Wiltshire Council Public Health Team offer links to information and health improvement services such as Health Trainers, Stop Smoking, Sexual Health, Substance Misuse, Healthy Weight, falls prevention, etc• Wiltshire Council's Active Wiltshire website has information about clubs, groups, sports, activities and facilities in Wiltshire• Wiltshire Council Sports and Leisure Centre web pages for information about Wiltshire Council's 11 in-house operated leisure centres, or the 10 centres operated by Places for People• Wiltshire Council's Active Health service provided in leisure centres across Wiltshire offers GP referral options for physical activity, cardiac rehabilitation, exercise after stroke, falls prevention and for a range of health conditions• Wiltshire Council's HealthyMe service provided in leisure centres helps children aged 7-11 and their families to gain and maintain a healthy lifestyle• Get Wiltshire Walking provides free supervised walks led by trained volunteers in all areas of Wiltshire• Wiltshire Council Community Matters web pages for the 18 community areas in Wiltshire, each of which has local events and activities• NHS Health Checks, a free cardiovascular disease risk assessment for adults aged 40-74 are offered every years by GPs across Wiltshire.• Free Swimming for under 16s in holidays• Big Pledge – an annual physical activity challenge for every one of all ages and abilities to become more active• Smokefree touchlines for sports• NHS Diabetes Prevention Programme offered by GPs to those patients meeting eligibility criteria <p>Wiltshire Obesity e-toolkits have been developed to help individuals and to support professionals:</p> <ul style="list-style-type: none">• Public facing: www.wiltshire.gov.uk/public-health-weight• Professionals: www.wiltshire.gov.uk/public-health-weight-professionals<ul style="list-style-type: none">○ The page for Health Professionals includes information about Wiltshire's Obesity Strategy and the services available to residents in Wiltshire to help them achieve/maintain a healthy weight <p>Bath and North East Somerset Council</p> <ul style="list-style-type: none">• There is one generic directory of services called wellbeing options: www.wellbeingoptions.co.uk<ul style="list-style-type: none">○ This was developed in response to the Care Act and was for adults in contact with social care and their carers. However, it does provide lots of information relevant for any adult• There are 2 other directories Rainbow resource for parents with children with SEND www.rainbowresource.org.uk and 1big database www.bathnes1bd.org.uk which provides information for young families <p><u>Services provided for adults</u></p> <ul style="list-style-type: none">• Virgin Healthy Lifestyles Hub and Lifestyle Advisors Service• Counterweight evidence-based weight management programme
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	<ul style="list-style-type: none">• Health in pregnancy support service• Passport to health• Slimming on referral• NHS Health Check• NHS Stop Smoking services <p><u>Services for CYP and families</u></p> <ul style="list-style-type: none">• Cook It!• HENRY – weight management• Director of Public Health Award for schools, colleges and early years settings• Every Day Active in Schools• National Child Measurement Programme• Community Play services• Health Visiting services• Infant feeding support• School nursing service <p>Devon County Council</p> <ul style="list-style-type: none">• Devon County Council Public Health directly commission the following programmes that contribute to CVD prevention:<ul style="list-style-type: none">○ NHS Health Checks universal programme○ Healthier Devon (targeted diabetes prevention programme delivered through a Social Impact Bond)○ Specialist stop smoking service○ One Small Step (Holistic lifestyle offer)○ MECC (Making Every Contact Count) training programme○ Substance misuse services (including alcohol brief interventions and services)• Public Health Devon play a lead supporting role to the Devon STP in the mobilisation and delivery of National Diabetes Prevention Programme• The Public Health team are also linked with the STP Long Term Conditions programme group to ensure integration with primary care pathways from the Health Checks and Diabetes Prevention programmes are running well and to maximise prevention opportunities in the CVD/AF prevention workplan that is being developed• The local authority also work across other areas such as sustainable transport and Naturally Healthy (local nature partnership), which link into increasing levels of physical activity in the population and general health and wellbeing but which may not be directly commissioned as CVD prevention <p>Plymouth City Council</p> <ul style="list-style-type: none">• Plymouth City Council directly commission these programmes:<ul style="list-style-type: none">○ NHS Health Checks universal programme○ One You Plymouth (holistic lifestyle offer that includes healthy weight and physical activity elements - Livewell Southwest Health Improvement Team)○ Specialist Stop Smoking service (Livewell Southwest Health Improvement Team)
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- General population stop smoking service – (GP Practices and Pharmacies across Plymouth)
 - MECC (making every contact count) Training programme
 - Substance misuse services (including alcohol brief interventions and services)
 - Plymouth City Council also:
 - lead Public Health action plans to promote healthy weight, smoking cessation, physical activity and good nutrition
 - lead the Thrive Plymouth network and Thrive Plymouth's 10-year plan to address health inequalities in the city which is partly underpinned by reducing CVD
 - lead the Physical Activity network and associated action plan
 - has CVD prevention identified as a priority in our Physical Activity Needs Assessment for Plymouth – we are currently refreshing this
 - work across other areas in the LA including Active Travel and the Natural Infrastructure team, which link into increasing levels of physical activity in the population and general health and wellbeing but which are not directly commissioned as CVD prevention
- Torbay Council**
- Torbay Council currently commission:
 - NHS Health checks
 - Torbay Lifestyles Team service including
 - Specialist Stop Smoking service
 - Tier 2 Weight Management Service
 - Health Trainer provision re. complex cases
 - Fitness in Torbay (Fitbay) Programme (GP Referral re. improved physical activity)
 - MECC Training programme
 - Torbay Council Public Health also chairs healthy weight and physical activity steering groups looking at partnership responses to these 2 areas
- Bristol City Council**
- Bristol City Council currently commission the following relevant services:
 - NHS Health Checks
 - Support to stop smoking (more than just support to stop smoking – also addresses illicit tobacco)
 - Adult weight management
 - Children's weight management
 - Alcohol brief interventions
 - Examples of wider, strategic work – the local authority are taking a whole system approach to the obesogenic environment, looking at influencing the food environment, physical activity, cycling/walking etc.
 - See also, entry for BNSSG STP
- South Gloucestershire Council**
- The following services are available:
 - NHS Health Checks
 - Stop smoking services

- Drugs and alcohol services
- Tier 2 weight management services (LifeShape)
- Healthy lifestyles directory for older people
- Advice on how to be more physically active

North Somerset Council

- The following services are available:
 - NHS Health Checks
 - Stop smoking services
 - Go4Life active directory – schemes include: Get Active pass; Sportivate; Staying Steady; Active 10; Sportarray; 10 Minute Shake Ups; Walking for Health; StreetGames; This Girl Can
 - Health trainers
 - Slimming on referral
 - Young people's substance advice service
 - Online directory for services to help people with drug and alcohol problems

Cornwall Council

- In relation to CVD prevention, the Council commission/provide the following services:
 - NHS Health checks
 - Physical activity strategy
 - Healthy Cornwall (health promotion team) offering physical activity programmes and 1:1 support
 - National Diabetes prevention programme (wave 2 so already one year in)
 - Lifestyle weight management provision (Tier 2)
 - Smoking cessation (via LES and Healthy Cornwall)
 - Whole system Healthy weight strategy (partnership approach)

Somerset Council

- Somerset Council Public Health Team offer links to information and health improvement services such as physical activity, healthy eating, stop smoking, sexual health, substance misuse, mental health, falls prevention, etc.
- The Healthy Somerset website offers information and signposting to various commissioned health and wellbeing services accessible across Somerset: <https://www.healthysomerset.co.uk/>
- Zing Somerset website has information about clubs, groups, sports, activities and facilities in Somerset and includes an activity post code finder
- Somerset County Council's Exercise Referral Scheme is specially designed for healthcare professionals to recommend their patients to an exercise programme in order to support their health and wellbeing and quality of life
- In house support to stop smoking for Mums 2 Be (M2B) and a core offer to residents who want to stop smoking tobacco
- The Public Health Team quality assure the GP referral opportunities available across the county
- The inhouse Zing service utilises a community development approach to deliver physical activity, healthy eating including alcohol support and advice
- MECC (Making Every Contact Count) training programme

- Health walks are a key element of physical activity provision
- NHS Health Checks, a free cardiovascular disease risk assessment for adults aged 40-74 are offered through 3 avenues - GP Surgeries, Pharmacies and Community Outreach
- Smokefree sports grounds
- Somerset is part of the NHS Diabetes Prevention Programme (digital and face to face)

Dorset County Council, Bournemouth Council and Poole Council

- Public health services in Dorset are commissioned by Public Health Dorset on behalf of Dorset, Poole and Bournemouth
- Public Health Dorset have a hub approach offered through Live Well Dorset. Contact with the hub is via website, phone and email:
 - GPs and secondary care health professionals can refer patients via the hub
 - People referred will have a conversation with a health coach following the COMBI approach to behaviour change. Those that are not ready to make changes will be followed up at a later date by the team
 - The staff are trained to deliver brief interventions
 - People will be signposted to relevant services based on the conversation
- Live Well Dorset offer:
 - Stop smoking services
 - Drug and alcohol services
 - Weight watchers
 - Physical activity opportunities
 - NHS Health Checks

Swindon Borough Council

- Live Well Swindon Hub is an information, advice and triage service managing all referrals and enquiries coming into the Community Health and Wellbeing Team, including:
 - Stop Smoking Service
 - NHS Health Checks
 - Community Navigators – offer one to one coaching and support for individuals aged 18+, who have been diagnosed with one or more long-term health conditions
 - Health Ambassadors and Befriending Service
 - Disability Sport
 - Health Walks
 - Adult weight management and child weight management
 - Steps to Health (Exercise Referral)
 - Healthy Lives (Pulmonary Rehab)
 - Supervised Gym Sessions

	<ul style="list-style-type: none"> ○ COPD classes
<p>Local Pharmaceutical Committees (LPCs)</p>	<p>Approximately 80-85% of South West pharmacies have Level 1 Healthy Living Pharmacy accreditation. Services to support CVD prevention provided by the separate LPCs are listed below.</p> <p>Cornwall and Isles of Scilly LPC</p> <ul style="list-style-type: none"> • Alcohol brief intervention service • Nicotine replacement therapy • NHS Health Checks • Diabetes patient activation measures <p>Avon LPC <u>Bristol, BANES, North Somerset, South Gloucestershire</u></p> <ul style="list-style-type: none"> • Stop smoking services <p><u>Bristol</u></p> <ul style="list-style-type: none"> • Alcohol and weight management services have been removed from Bristol, and alcohol services were removed from South Gloucestershire early in 2018 <p><u>North Somerset</u></p> <ul style="list-style-type: none"> • NHS Health Checks, but not widely used <p>Gloucestershire LPC</p> <ul style="list-style-type: none"> • Healthy Living Pharmacies encouraged to participate in promotional and signposting activities to support reduced CVD risk • Stop smoking service commissioned through community pharmacies • Nicotine replacement therapy supply service to support other stop smoking advisors commissioned through community pharmacies <p>Swindon and Wiltshire LPC</p> <ul style="list-style-type: none"> • Pathway agreed for referral into National Diabetes Prevention Programme • Healthy Living Pharmacies encouraged to participate in promotional and signposting activities to support reduced CVD risk • NHS Health Checks commissioned and provided through a small number of Swindon pharmacies • Referral pathway to Health Trainers agreed and working to support healthy lifestyle changes • Stop smoking service commissioned through community pharmacies <p>Somerset LPC</p> <ul style="list-style-type: none"> • NHS Health Checks • Smoking cessation support including a PGD for Champix

Dorset LPC

- NHS Health Checks are commissioned by Public Health Dorset
- Health Checks were originally available from a large number of providers and were opportunistic and by invitation. This has now changed – Health Checks are only by invitation and they are provided by one provider per locality across Dorset
- GP practices and one large national community pharmacy chain were successful in bidding to provide the Health Check service across the 13 localities
- The pharmacy provider for NHS Health Checks covers only a small number of the localities and is offered by 16 pharmacies only
- A smoke stop supply and support service is delivered by 65 community pharmacies across Dorset. This is commissioned by Public Health Dorset
- HEE and NHS England Wessex Pharmacy LPN have provided significant funding for leadership training and health champion training to support the development of Healthy Living Pharmacies across Wessex
- In May and June this year they are also supporting "Knowledge into Action" days for health champions; these days will include understanding of why and how to maintain the Health Promotion Zone and running effective health promotion campaigns
- MECC training is being included as part of the day and delegates may also do the additional qualification of RSPH Level 2 Applied Award in Understanding Health Improvement should they wish to
- With such good uptake of HLP across Wessex, there is now work being done on Level 2, this will be progressed through the LPN in 2018/19
- NHS England Wessex Pharmacy LPN developed a Dementia Friendly Pharmacy Framework for pharmacies to complete and become dementia friendly
- The framework helps support patients and carers and also provides education/advice about how to prevent developing dementia
- Across Dorset, 75% of pharmacies are now dementia friendly

Devon LPC (all services listed commissioned jointly by Devon County Council, Torbay Council and Plymouth City Council)

- Smoking cessation structured support and nicotine replacement therapy supply

Appendix 4: PHE menu of preventative interventions

These evidence-based, preventative public health interventions can help improve the health of the population and reduce health and care service demand in the short to medium term, and address a number of the concerns highlighted in the gap analysis. Of particular note, the following preventative interventions are estimated to improve health and wellbeing and save money to the health and/or care system within a five-year time horizon:

- alcohol – identification and brief advice (IBA) in primary care
- alcohol – alcohol care teams (ACT) in secondary care
- tobacco – screening, advice and referral in secondary care
- hypertension – improved management of hypertension in primary care

Risk factor	Intervention	Supporting evidence
CVD secondary prevention	Local authorities commission NHS Health Checks and CCGs support providers to increase offer of NHS Health Checks, testing and risk assessment (being more proactive with deprived groups), particularly via GPs and outreach testing eg pharmacy	Diseases caused by high blood pressure are estimated to cost the NHS over £2 billion every year.
	CCGs support primary care to ensure patients receive optimal care and drug treatment where relevant; extend the role of pharmacists in clinical management; and support patient activation and self-care	Over 5 million people are unaware they have high blood pressure, yet it affects more than 1 in 4 adults and is one of the biggest risk factors for premature death and disability in England. High blood pressure accounts for 12% of all visits to GPs in England. People from the most deprived areas are 30% more likely to have high blood pressure.
Atrial fibrillation (AF)	Increasing the proportion of known AF patients who are offered and started on appropriate treatment from 74% to 89% over the next 5 years	Atrial fibrillation (AF) related illnesses cost the NHS over £2.2bn p.a. The risk of suffering a stroke is increased by nearly 500% for AF patients. AF affects nearly 2% of the population.
	Introducing regular systematic audit in all practices (using tool such as GRASP-AF) to identify people at risk who are not anticoagulated or who are sub-optimally anticoagulated	Effectiveness: one stroke will be prevented for every 25 patients treated with anticoagulation. Costs: PHE estimates the cost per intervention, when prescribing anticoagulation, is £648 per patient p.a. in year 1, increasing to £1,000 by year 5. Cost of the anticoagulation per person p.a.

	<p>Increasing opportunistic detection rates in line with expected prevalence through NHS Health Checks and other mechanisms</p> <p>Strengthening and upskilling clinical leadership on AF</p>	<p>ranges from £283 to £800.</p> <p>Net savings: PHE estimates that the intervention would result in net savings to the system of c. £1,453 per person p.a. by year 5. These can be broken down into c. £1,815 p.a. per person savings to the social care system and a cost to the NHS of £362 per person p.a. This cost would contribute towards improved care and quality, and patient safety.</p>
High blood pressure	Regular systematic audits of practice registers to identify diagnosed hypertensives with suboptimal blood pressure control	Effectiveness: Pharmacist-led interventions have been shown to reduce systolic blood pressure by an estimated 7.6 mmHg. In the Dudley pilot, 90% of GP practices achieved optimal treatment targets of 140/90mmHg for their hypertensive population (the standard is 50%, and inter-practice variation 6-99%).
	Developing the role of community and GP practice-based pharmacists to monitor and control blood pressure of sub-optimally managed hypertensives, support adherence to drug regime and advise on lifestyle change	Costs: PHE estimates costs of c£28 per new controlled person in year 1 (average cost of one 10 minute and three 5 minute consultations with a pharmacist at £64 hourly unit cost) based on the assumption that achieving a blood pressure treatment to target for one patient will require 4 consultations with a practice-based pharmacist.
	Wider use of self-monitoring by patients to help eliminate false readings and provide a clearer picture of blood pressure over time	Net savings: PHE estimates that for a 20% improvement in management of hypertension, to 140/90 mmHg target, system net savings would be estimated to be c£14 p.a. per controlled patient over a 5 year horizon. Of these, c£5.75 would accrue to the NHS and c£7.91 would accrue to local authorities
High cholesterol and familial hypercholesterolaemia	Increased detection – through practice audit, find patients with cholesterol levels suggestive of familial hypercholesterolaemia, confirm, cascade test and treat	As many as 60% of adults in England have raised cholesterol, which is a key risk factor for cardiovascular disease (CVD). CVD in total costs £19bn to the UK economy each year. It is estimated that 1 in 500 people have familial hypercholesterolaemia, a genetic cause of raised cholesterol affecting individuals since birth.
	Improve the cholesterol management of people with high-CVD-risk conditions such as diabetes, measured through QOF indicator DM004	
	Improve statin prescribing and adherence among people, particularly those with established CVD	
Diabetes	NHS Diabetes Prevention Programme – in particular, CCGs and local authorities support NHS Health Checks, primary care and NHS Diabetes Prevention Programme providers (where in place) to jointly implement effective referral	<p>Effectiveness: The intervention effectiveness corresponds to a mean weight loss of 3.24kg per person.</p> <p>Cost: The intervention cost is assumed to be £270 per person.</p>

	<p>pathways</p>	<p>Local expenditure in case finding and referring individuals to the programme is not included.</p> <p>Net savings: In addition to significant health benefits, the DPP Return On Investment tool, soon to be published by PHE, suggests that implementing the NHS DPP will lead to an average undiscounted cumulative net NHS saving of £35m within 15 years (gross savings of £141m plus DPP costs of £105m), plus an additional £7m for social care. This equates to roughly £90 savings per person, assuming that 390,000 individuals undergo the intervention throughout the duration of the programme (30,000 in year 1, 60,000 in year 2 and 100,000 in each of years 3, 4 and 5).</p>
	<p>Increase the proportion of newly diagnosed diabetes patients attending a structured education course</p>	<p>Effectiveness: structured education can support patients to stabilise blood glucose levels, reducing the risk of complications and improving quality of life, thus reducing the financial burden on the NHS and wider social care system.</p> <p>Costs: evidence suggests that cost of delivering X-PERT (type 2 diabetes focused) per person attending is £65.</p> <p>A diabetic service can set up a DAFNE project (type 1 diabetes focused) with a cost of c£8,000 in year 1 and c£3,700 in years 2 and 3 respectively.</p> <p>Net savings: NHS England estimates that X-PERT could save between £66 to £76 per person p.a. One organisation delivering the programme to c3,500 patients could save c£260k per year</p> <p>Delivery of DAFNE could deliver savings of an estimated c£93,000 per 100,000 population.</p>
	<p>Reduce variation in treatment target achievement through all GP practices meeting the 2014/15 median level, to be reviewed annually. CCGs support local GPs to perform at the level of the median, in relation to the 3 NICE-recommended diabetes treatment targets (HbA1c \leq58mmol/mol (7.5%); cholesterol $<$5mmol/L; blood pressure \leq140/80 mmHg)</p>	<p>Diabetes treatment currently costs the NHS £9.8bn a year, which represents around 10% of the annual NHS budget. Indirect societal and productivity costs raise this figure to nearly £23.7bn.</p> <p>It is estimated that in 2015 there were 5 million people aged 16 years and over with non-diabetic hyperglycaemia.</p>

	<p>Establish multi-disciplinary diabetic foot teams. CCGs support the provision of multidisciplinary diabetic foot teams for people with diabetic foot disease, and access to specialist diabetes teams for inpatients with diabetes</p>	<p>There is a direct association between obesity and type 2 diabetes – those who are overweight or obese are at higher risk of developing the condition and 75% of people with type 2 diabetes are overweight or obese. Two-thirds of English adults and one third of 11 to 15-year-olds are currently overweight or obese. Projections show that 70% of people will be overweight or obese by 2034 and one in 10 will develop type 2 diabetes.</p> <p>People with diabetes are at risk of a range of health complications including CVD, blindness, amputation, kidney disease, depression and dementia.</p>
<p>Alcohol</p>	<p>Establish and/or optimise alcohol care teams in district general hospitals</p>	<p>Effectiveness: a consultant-led, multi-disciplinary ACT in Bolton saved 2,000 alcohol-related bed days and reduced readmissions by 3%. An external evaluation showed a 43% reduction (3,814 to 2,155) in alcohol-related A&E attendances alone, in the year following the introduction of a small alcohol care team in the Alexandra Hospital, Worcestershire.</p> <p>Costs: cost per nurse c£41,250 p.a., including on-costs. Depending on the size of the hospital, 3-5 specialist nurses would be needed to effectively deliver ACT. For example, to achieve this, Royal Bolton deployed a team of 4 alcohol specialist nurses providing a 7-day service costing c£165,000 p.a.</p> <p>Net savings: net savings per nurse can be c£111,930 p.a. on average, based on this case study which demonstrated net savings of £471,000 p.a. This is equivalent to a return of investment (ROI) of £3.85 for every £1 invested, a year from implementation.</p>
	<p>Provide alcohol Identification and Brief Advice in primary and secondary care settings</p>	<p>Effectiveness: identification and brief advice (IBA) can reduce weekly drinking by between 13% and 34%, resulting in 2.9 to 8.7 fewer drinks per week. This will reduce relative risk of alcohol-related conditions by c14%, and absolute risk of lifetime alcohol-related death by c20%.</p> <p>Costs: PHE estimates that the costs of IBA could be c£7.50 per person receiving brief advice. This would include the following components: £0.04 per person at consultation to complete an</p>

		<p>Audit-C scratch card; of the people completing the scratch card, we would expect c30% to screen above threshold, and their costs would also include at least £3.40 (1 min GP time) and £3.70 (5 min nurse time), when delivered in primary care.</p> <p>Net savings: PHE estimates that the net saving to the NHS per person receiving brief advice could be on average £27 p.a. (or equivalently a saving of £136 over 5 years).</p>
	<p>Establish Alcohol Assertive Outreach Teams (AAOT) to reduce repeat users of hospital and other services such as police and social services. CCGs and local authorities work together to commission outreach teams in hospitals or the community that complement alcohol care teams by identifying and proactively engaging patients with repeated admissions. AAOT will also work face-to-face with patients to implement tailored care plans that address their alcohol dependence, mental/physical health and welfare needs.</p>	<p>In England, 25% of the population (33% of men and 16% of women) consume alcohol at levels that increase their risk of alcohol-related ill health (analysis of health survey for England 2014).</p> <p>The annual cost of alcohol-related harm to the NHS in England is £3.5 billion, a third of which is due to alcohol-related hospital admissions.</p>
	<p>Establish clear care pathways to ensure sustained engagement with high volume service users. Local authorities work with CCGs to establish pathways and commission specialist services that engage high-impact users as a priority.</p>	<p>Alcohol misuse contributes significantly to 48 health conditions, wholly or partially, due either to acute alcohol intoxication or to the toxic effect of alcohol misuse over time. Conditions include cardiovascular conditions, cancers, depression and accidental injuries. Risk of ill health increases exponentially as regular consumption levels increase. Most of these harms are preventable.</p>
	<p>Ensure alcohol treatment systems provide prompt access for parents who are identified as harmful/dependent drinkers with agreed pathways between services to maximise support and reduce risks to children and families. Local authorities establish clear pathways to alcohol treatment and commission interventions for families where parental alcohol misuse may pose a risk.</p>	
<p>Tobacco</p>	<p>Provide screening, advice and referral in secondary care settings. Secondary care providers to provide screening, advice and referral in acute and mental health trusts, and ensure that the care plan at discharge of patients who smoke addresses their tobacco dependence</p>	<p>Effectiveness: the quit rates among patients who want to quit and take up a referral are between 15% and 20% compared to 3% to 4% among those without a referral. A Cochrane Review highlighted the appropriateness of offering VBA to all hospitalised smokers, regardless of admitting diagnosis.</p> <p>Costs: PHE estimates total costs of the intervention to be more than c£690 per successful quitter. Of these, the NHS could incur a one-off c£190 per successful long-term quitter from delivery of</p>

		<p>nicotine replacement therapy and follow-up, and could face a potential one-off investment from setting up an electronic referral system (ERS) of c£11k and annual ERS maintenance costs of c£3.5k. Local authorities could incur £500 of costs per successful quitter, through commissioning local stop smoking services (LSSS).</p> <p>Net savings: cumulative minimum of c£119 per quitter over the first 5 years to NHS (ie average savings of £24 p.a.), assuming it is phased and excluding the ERS investment. The intervention can become net saving in year 5 after implementation. NB this is a conservative estimate.</p>
	<p>Trusts to implement NICE guidance PH45 “Smoking: Harm reduction”. Trusts to provide support for temporary abstinence for smokers unready to stop smoking completely or permanently. May include cutting down to quit and long-term nicotine use to prevent relapse to smoking</p>	<p>NICE assessed scenarios which sought to help someone quit or reduce their consumption, and of these, 3 were cost saving and 12 were highly cost effective.</p> <p>Costs per quality adjusted life year (QALY) were as low £437. Of the scenarios based around temporary abstinence 5 were highly cost effective. They ranged from an estimated £765 per QALY to £8,464 per QALY.</p> <p>NICE found that the benefits outweigh the costs; except in scenarios where NRT was prescribed for more than 5 years and quit rates were modelled at less than 4%.</p>
	<p>Assess all pregnant women for carbon monoxide to identify potential smoking and refer for specialist support. Healthcare professionals screen all pregnant women at ante-natal appointments and refer women with elevated levels to specialist services</p>	<p>Evidence shows that it is possible to double the number of pregnant women who stop smoking during pregnancy once CO screening and an opt-out referral system is put in place (Reference: Campbell et al).</p> <p>Based on an evaluation (submitted for publication) of the North East BabyClear programme (including CO screening, training healthcare professionals, providing materials and stop smoking support), estimates suggest that overall health system cost is c£31 per pregnancy. The majority of the costs are attributable to the increased referrals to smoking cessation services. This is calculated using an average trust size of 3,000 deliveries per year.</p> <p>Based on the North East BabyClear programme, where 28% of women were smoking at the start of pregnancy, estimates suggest</p>

	<p>All mental health trusts to have smokefree buildings and grounds with staff trained to facilitate smoke cessation. CCGs require acute trusts to implement smokefree policies on estate grounds and support staff to encourage compliance with the policy</p>	<p>the programme would lead to 96 additional quitters per trust. Referral rates doubled and birthweight of babies born to mothers who stopped smoking was higher than those who continued.</p> <p>Effectiveness: PHE estimates that 95% of patients could be screened and 95% of those who are smokers could be given appropriate help to quit. It is estimated the long-term quit rate for long term patients is 40%, and 25% for short-term patients.</p> <p>Costs: PHE estimates that the intervention could cost c£1,430 p.a. to the health and care system on average over 10 years. The average cost per person to the NHS is c£790 p.a. over 10 years, and c£640 to local authorities. This includes nicotine replacement therapy, one off set up cost and training and estate costs (eg activities to replace smoking).</p> <p>Net savings: PHE estimates net savings of c£1,460 p.a. per person to the health and care system on average over 10 years. The average net saving per person to the NHS.</p>
<p>Diet and obesity</p>	<p>CCGs and local authorities ensure there are evidence-based weight management services accessible to their local population through co-commissioning across the obesity pathway and that these are robustly evaluated</p> <p>Implement Government Buying Standards for food and catering services (GBSF) across a range of public settings and facilitate the uptake of nutrition policy tools. CCGs and</p>	<p>Data based on a published evidence using the PHE weight management economic tool. PHE has assumed a tier 2 intervention funded by local authorities that recruits 45 men and 255 women with an average age of 51 years, a mean starting BMI of 33.2 kg/m² and a 36% drop out rate.</p> <p>Effectiveness: participants completing a 12-month intervention could reduce their body mass index by an average of 2.46 kg/m².</p> <p>Costs: estimated at a total upfront cost of £50 per person enrolled.</p> <p>Net savings: over a 5 year period, average annual health and care savings are c£30 p.a. per person enrolled (ie cumulative saving of c£150 per person over 5 years). Weight management interventions aim to have lifelong impact and are unlikely to manifest as high savings in the short-term. This intervention could be cost saving to the health and care system by year 2.</p> <p>In 2011, food and drink sales in public sector organisations accounted for 6.5% of total sales in the food service sector. At £2.1bn, this provides a large-scale opportunity with significant</p>

	<p>local authorities to require providers to do this and promote consistency across hospital and health settings and local businesses</p>	<p>purchasing power to influence the diets of those who use these services.</p> <p>In 2008, meeting catering guidance in a care home setting reduced total fat consumption by 12g, saturated fat by 13g and salt by 0.1g while micronutrients such as iron, potassium and folate increased by 50% to 75%; all meeting government recommendations.</p> <p>Buying healthier food following the implementation of GBSF in 2 canteens in 2013 resulted in an increase in annual sales of 9% and 17% respectively when compared to 2012, in part due to the perception of food being more appetising when made on site.</p>
	<p>Integrate weight management and mental health services. CCGs and local authorities work together with providers to enable access into appropriate community and clinical obesity services for individuals suffering with mental health illness and/or with learning disabilities</p>	<p>The annual costs associated with obesity to the wider economy, NHS and social care systems are estimated to be £27 billion, £6.1 billion a year and £352 million respectively.</p> <p>Over one fifth of 4 to 5-year-old children, more than a third of 10 to 11-year-olds and two-thirds of English adults are obese or overweight. Being obese can increase the risk of developing a range of serious diseases, including hypertension, type 2 diabetes, cardiovascular diseases, some cancers, obstructive sleep apnoea and musculoskeletal problems.</p>
	<p>Tackle the obesogenic environment. CCGs and local authorities work together to support healthier food and drink choices, increase physical activity opportunities and reduce sedentary behaviour and access to energy dense food and drinks</p>	
	<p>Make every contact count. Health and care professionals empower healthier lifestyle choices and improve access to relevant and appropriate obesity services supported by All Our Health</p>	
<p>Physical activity</p>	<p>Healthcare professionals to deliver effective brief advice on the benefits of physical activity. Invest in raising skills and knowledge of healthcare professionals such as the PHE Clinical Champions Programme</p>	<p>Effectiveness: PHE estimates that each clinical champion could train 150 qualified healthcare professionals and 200 healthcare professionals in training (trainees) per year. Healthcare professionals are expected to have c10,000 patient contacts, and trainees are expected to have c5,000 patient contacts per year. PHE estimates that 40% of those trained will retain the information and act on it and that in 64% of consultations the patient is eligible for the intervention and will receive advice. Finally, PHE expects that 30% of targeted patients will respond to a very brief intervention and 15% of those patients taking action will achieve 150 minutes per week of physical activity.</p>

		<p>Costs: a dedicated local champion costs the local area approximately £13,000 per annum based on one session per week, supervision, travel and training costs, equating to £38 per healthcare professional trained.</p> <p>Net savings: PHE estimates using a champion for one year could deliver a minimum of £308,000 of direct savings to the local NHS over 5 years, through the 4 modelled conditions alone and potential savings within the financial year.</p>
	Increase active travel for staff, patients and local population. Develop travel plans with supporting local activation to get staff, patients and the local population to walk and cycle	<p>Department for Transport estimates a 35:1 cost-benefit ratio of for interventions that increase cycling and walking. Evidence suggests active travel plans are more effective with supporting activation activities like cycling classes or group walking interventions.</p> <p>The King's Fund calculated that getting one more person to walk to school pays back £768; and to cycle to work rather than by car between £539 and £641 in terms of NHS savings, productivity improvements and reductions in air pollution and congestion.</p>
	CCGs and local authorities to invest in evidence-based exercise programmes for patients. For example, providing exercise referral schemes where patients receive supervised support by trained professionals	<p>It is estimated that physical inactivity costs the NHS £0.9bn, and an additional £6.5bn each year to wider society.</p> <p>The UK Chief Medical Officers (CMOs) recommend adults undertake at least 150 minutes per week of moderate physical activity, muscle strengthening activities on 2 days per week and minimise extended periods of sitting.</p>
	Adopt and promote PHE's campaigns. Local government, NHS providers and CCGs to draw on Start4Life, Change4Life and One You campaigns	
	Local authorities to encourage employers through Chamber of Commerce and NHS procurement levers to participate in local workplace health accreditation schemes such as the Better Health and Work Award, Workplace Wellbeing Charter and Mindful Employer Charter to put in place a structured, evidence-based approach to employee health and wellbeing	<p>Current evidence shows that 20% of men and 25% of women are doing less than 30 minutes activity per week, and 62.5% of those with long-term health conditions are inactive.</p> <p>An inactive person has 38% higher hospital bed days, 5.5% higher GP visits and 13% higher use of specialist services. Physical activity can reduce the risk and help the management of over 20 long-term conditions.</p>
Dementia and healthy ageing	Raise awareness of actions the public can take to reduce their risk of dementia using midlife healthy lifestyle messages to tackle local dementia risk factor prevalence	Evidence suggests that an unhealthy lifestyle can increase the risk of dementia. For example, smoking can double the risk of dementia. Raising awareness of this risk could encourage the implementation of interventions such as smoking cessation

		<p>interventions and ultimately reduce dementia risk.</p> <p>Smoking cessation interventions can be 15-20% effective in stopping smoking – see tobacco slides for more detail.</p> <p>The annual cost of dementia to society in the UK is estimated to be £26.3bn. A 20% reduction in risk factors per decade could reduce UK prevalence by 16.2% (300,000 cases) by 2050. This would constitute annual savings to society of £4.26bn vs current prevalence.</p>
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Appendix 5: Gaps in hypertension, AF and cholesterol diagnosis and management

Reported to estimated prevalence of hypertension and AF by CCG, 2016/17

	B&NES	Bristol	Dorset	Gloucs	Kernow	NEW Devon	North Somerset	Somerset	South Devon & Torbay	South Gloucs	Swindon	Wiltshire
Proportion of registered population aged 65+ years	18.8%	12.6%	23.9%	20.7%	24.0%	22.4%	22.8%	23.3%	25.6%	18.3%	15.2%	21.7%
Hypertension (HT)												
Reported to estimated prevalence of HT, 2016/17	57.5%	54.6%	59.2%	58.1%	58.2%	59.2%	60.7%	60.0%	60.5%	59.3%	59.4%	59.6%
People with possible undiagnosed HT	19,150	45,200	85,050	65,150	63,700	96,150	22,650	62,000	32,650	25,650	22,250	50,200
England average, 58.5%	Lower	Lower	Higher	Lower	Lower	Higher	Higher	Higher	Higher	Higher	Higher	Higher
Atrial fibrillation (AF)												
Reported to estimated prevalence of AF, 2016/17	80.4%	82.5%	83.6%	80.3%	79.3%	79.8%	87.8%	85.1%	83.1%	83.7%	76.5%	79.4%
People with possible undiagnosed AF	1,046	1,651	4,287	3,563	3,708	5,615	822	2,663	1,683	1,116	1,196	2,952
England average, 75.8%	Higher	Higher	Higher	Higher	Higher	Higher	Higher	Higher	Higher	Higher	Similar	Higher

Data sources

PHE National GP Profiles: <https://fingertips.phe.org.uk/profile/general-practice>

BHF 'How can we do better?' CCG packs: <https://www.bhf.org.uk/bp-better>

Stroke Association 'How can we do better?' CCG packs: <https://www.stroke.org.uk/for-professionals/stroke-prevention/af-reports-ccg>

STP-level data on key CVD risk factors including hypertension, AF and cholesterol, 2015/16

This analysis was conducted by the PHE South region on behalf of the South CVD Prevention Board.

STP	People on AF register as a percentage of the estimated number of people with AF	People with diagnosed and controlled HT as a percentage of the estimated numbers with HT	% patients with diabetes in NDA achieving all 3 treatment targets	% more patients treated for high cholesterol to achieve 75th centile performance	Smoking status at delivery (%) (CCG IAF 15/16)	QOF prevalence of obesity aged 18+ (CCG IAF 15/16)
Bath, Swindon and Wiltshire	72.3%	46.0%	35.9%	7.0%	10.0%	9.2%
Bristol, North Somerset and South Gloucestershire	76.3%	42.6%	32.3%	4.6%	10.3%	8.2%
Buckinghamshire, Oxfordshire and Berkshire West	69.3%	43.4%	40.1%	5.3%	7.4%	7.5%
Cornwall and the Isles of Scilly	71.7%	42.1%	33.8%	4.9%	13.3%	11.8%
Devon	74.7%	43.5%	35.4%	7.0%	11.7%	10.3%
Dorset	76.8%	42.7%	34.6%	6.9%	11.7%	8.1%
Frimley Health	66.4%	43.4%	42.3%	4.6%	7.6%	7.5%
Gloucestershire	73.8%	43.5%	34.4%	5.3%	9.3%	9.4%
Hampshire and the Isle of Wight	69.7%	43.6%	36.8%	5.1%	10.9%	9.0%
Kent and Medway	74.6%	45.8%	38.4%	6.5%	13.7%	9.7%
Somerset	77.6%	43.3%	35.0%	6.4%	13.5%	8.3%
Surrey Heartlands	69.2%	42.0%	40.8%	6.2%	5.4%	5.7%
Sussex and East Surrey	73.8%	41.8%	38.4%	4.9%	9.2%	7.7%

Data sources

PHE Fingertips.phe.gov.uk: Number of people on AF register 15/16 – QOF data source. Estimated prevalence based on Populations by age and sex:

http://www.hscic.gov.uk/catalogue/PUB15644/GP_Practice_counts.csv

Age and sex-specific prevalence rates derived from: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3862395/pdf/clep-5-475.pdf>

PHE Fingertips.phe.gov.uk: Number of people on Hypertension register with BP <=150/90 15/16 – QOF data source. Estimated prevalence based on population age, sex, ethnicity and deprivation, scaled to 15/16 practice populations

CCG intervention comparator: <http://www.yhpho.org.uk/default.aspx?RID=226091>

Appendix 6: BACPR national minimum standards 2018

Minimum Standards (MS)
Standard 1: The delivery of six core components by a qualified and competent multidisciplinary team, led by a clinical coordinator
MS 1.1: At least three professions in the CR team – these are professionals who regularly have input into the CR programme.
Standard 2: Prompt identification, referral and recruitment of eligible patient populations
MS 2.1: Cardiovascular rehabilitation is offered to all these priority groups: MI, MI+PCI, PCI, CABG, Heart Failure.
Standard 3: Early initial assessment of individual patient needs which informs the agreed personalised goals that are reviewed regularly
MS 3.1: Percent of patients with recorded assessment 1 is equal to or more than: England 80%; Northern Ireland 88%; Wales 68%
Standard 4: Early provision of a structured cardiovascular prevention and rehabilitation programme (CPRP), with a defined pathway of care, which meets the individual's goals and is aligned with patient preference and choice.
MS 4.1: Time from post-discharge referral to start of Core CR programme for MI/PCI is equal to or less than national median of England 33 days, Northern Ireland 40 days, Wales 26 days
MS 4.2: Time from post-discharge referral to start of Core CR programme for CABG is equal to or less than national median of England 46 days, Northern Ireland 52 days, Wales days 42
MS 4.3 Duration of Core CR programme is equal to or more than national median of 56 days.
Standard 5: Upon programme completion, a final assessment of individual patient needs and demonstration of sustainable health outcomes
MS 5.1: Percent of patients with recorded assessment 2 (end of CR) is equal to or more than: England 57%, Northern Ireland 61%, Wales 43%
Standard 6: Registration and submission of data to the National Audit for Cardiac Rehabilitation (NACR) and participation in the National Certification Programme (NCP_CR)
MS 6.1: Obtaining a valid NACR NCP_CR report

For more information, please see The Minimum Standards for National Certification Programme for Cardiovascular Rehabilitation: 2018:

http://www.bacpr.com/resources/DCZ_Minimum_Standards_2018.pdf