BP evaluation Surrey and Sussex

Final report

June 2021

Dr Ricarda Micallef

Kingston University

Executive Summary

Background

Cardiovascular disease (CVD) is still the leading cause of death in England causing 1 in 4 deaths. The General Practice 5-year forward view stated an ambition to transform how pharmacists, their teams and community pharmacy work as part of wider NHS services in their area. In the 2017 guidance Health matters: combating high blood pressure, Public Health England recommend the use of community pharmacy for helping to detecting CVD risk factors.

The blood pressure plus service was launched in 27 community pharmacies across Surrey Heartlands Sustainability and transformation partnership (STP) in April 2019 as a pilot to improve detection and management of CVD risk conditions, specifically hypertension and atrial fibrillation.

The Surrey Heartlands sustainability and transformation partnership (STP) area covers three Clinical Commissioning Groups (CCGs); North West Surrey, Surrey Downs and Guildford & Waverley CCGs. During the course of the project the STP transitioned into an integrated care system (ICS); Surrey Heartlands Health and Care Partnership.

In Surrey, CVD is the leading cause of the gap in life expectancy between the most and least socio-economically deprived areas. Only around 6 out of every 10 people who have hypertension in Surrey Heartlands have been diagnosed, leaving more the 80 thousand people potentially unaware they have a condition that significantly raises their chances of a heart attack or stroke. At GP practice level, diagnosis rates can fall to as low as 46% for some practices. Atrial Fibrillation is also under-diagnosed across Surrey Heartlands, with around one third of people suffering from the condition unaware and undiagnosed.

The government in their 10-year CVD ambitions would like to focus on increasing detection and therefore management of the cardiovascular ABC's; Atrial Fibrillation, Blood pressure and cholesterol.

Community pharmacies have been involved in identification of CVD since 2016 and the number is increasing. The service was launched with an aim of early diagnosis of Blood Pressure and Atrial Fibrillation check, especially for local people to access the service and by working with local pharmacies, to reach out to people who may not have had recent contact with their GP or other healthcare professionals.

In Surrey, CVD is the leading cause of the gap in life expectancy between the most and least socio-economically deprived areas. CVD is of course strongly related to lifestyle factors such as smoking, weight and inactivity.

Proposed outcomes for the project

The overall outcome is to understand the link between early detection of cardiovascular disease, blood pressure and Atrial Fibrillation in patients, appropriate referral into the healthcare system in a timely manner and the benefits of providing preventative measure to patients to help them control and manage their long term conditions.

Key proposed outcomes are as follows:

1) To reduce the burden of ill-health and deaths caused by hypertension and AF (i.e. reduce stroke and coronary heart disease events, such as myocardial infarction or death due to a cardiac cause)
2) To increase the awareness amongst citizens of the link between the conditions and serious cardiac events such as stroke
3) To increase the number of people who “know their numbers” i.e. have opportunity to check their blood pressure and pulse
4) To increase citizens capacity (in terms of knowledge and skills) to manage/prevent high blood pressure through lifestyle modifications
5) To increase the number of citizens who have hypertension or AF who are actually diagnosed
6) To ensure that these aims are equitable across Surrey Heartlands in relation to CVD need in order to reduce CVD-related health inequalities (i.e. the interventions are targeted)

Aims / Objectives

This project aims to determine insights from the pharmacy teams involved in the pilot to determine their opinions of the service, to explore learnings about the delivery of the service, outcomes achieved and any changes that are required going for future developments, in order to enhance and improve the current service. This will include exploring staff attitudes towards the service, promotion and uptake, referral pathways, patient outcomes and recommendations for the future from identified barriers and enablers.

Blood pressure plus service

Aim of service intervention: improved detection and management of CVD risk conditions specifically hypertension and AF
Proposed outcomes of intervention: improved detection and improved management
Sites of intervention: Community pharmacies and workplaces

Inclusion criteria:

- Anyone who is aged 35 years and over
- Without known cardiovascular disease including: High blood pressure (or are on treatment for high blood pressure), Atrial Fibrillation, Diabetes, Chronic Kidney Disease, Angina, Stroke, Transient Ischaemic Attack, Heart failure and Myocardial infarction.

Exclusion Criteria:

- Anyone under the age of 35 years of age
- Has diagnosed CVD disease
- Is on any cholesterol reducing medicine
- Pregnant women

Process: During the Blood Pressure Plus (BP+) check, a participant had their blood pressure taken in accordance with the NICE guidelines and were screened for AF using AliveCor. Results from those participating in the service were added to PharmOutcomes, an online platform for recording service provision.

Evaluation Methodology

This was a mixed method study using data from multiple sources. Data collected on PharmOutcomes was analysed and presented. PharmOutcomes was used throughout the

service and collected demographic data about patients, along with results and data regarding referral. A patient survey was also used to capture views and knowledge of patients before and after the service. Furthermore a customer satisfaction survey was also used.

A survey collected experiences of pharmacies and follow up interviews were also completed with pharmacies.

Data analysis

PharmOutcomes and patient survey data was downloaded and analysed using Microsoft Excel using descriptive statistics. Statistical significance was established using descriptive statistics. For all statistical tests, $P<0.05$ was considered to indicate statistical significance within the reported results. Thematic analysis was used for interviews, with quotes being used to illustrate the findings.

Results

As of the end of March 2021 and the end of the commissioned service, 4591 BP+ checks had been completed. Of these, 3998 had been completed in community pharmacies with the remaining 593 were completed as community outreach in workplaces.

From the 4591 checks completed a total of 916 (20%) patients had a blood pressure reading of 140/90 or over, with 225/916 having a reading of 160/100 or over. Those in the age range 55-64 were most likely to be identified. The number found from the different IMD deciles is not significantly significant, showing an even identification across groups.

In total from the manual pulse check there were 317 (6/9%) patients who went on to be tested using the AliveCor. Of these 317, 274 (86%) had a normal outcome, with 15 (4.7%) having possible AF detected.

Looking at potential strokes saved, assuming that all the patients identified were started on the appropriate treatment. In total, 3.96 potential strokes were saved. This is based on NHS Size of the Prize estimates which say for every 25 patients identified with AF & anticoagulated 1 stroke is saved. From the 15 patients identified this would mean 0.6 strokes being prevented. For every 67 patients identified with hypertension (>160/100) and treated with anti-hypertensives 1 stroke is saved. From the 225 patients identified therefore 3.36 strokes would be saved.

Overall, the return on investment for the project was £26,171. This is based on Public Health England calculations that each case of hypertension (>160/100) found and treated to target avoids costs of £250 to health and social scare. For the 225 cases identified this would save £56,250. There is a cost avoidance of £671 for each AF case based on imperial college AF impact model, therefore for the 15 identified cases £10,065 worth of cost would be avoided. Therefore, there are total savings to the system of £66316. Taking away the total costs to run the project of £40,144 this gives a return of investment of £26,171.

It should be noted that due to data protection issues, although the numbers above are the potential numbers saved, we are unable to give complete numbers of actual numbers treated as a result of the service. For future services a follow up of the patient journey would be useful, to ensure GP and patient outcomes are recorded.

Patient survey data

From the results 100% of the respondents (n=53) stated that after the check they knew their blood pressure with an increase in knowledge seen. When asked what was considered high

blood pressure before the check 37 (70%) were unsure with 5 stating 120/80 and all others stating 140/80 or 140/90. After the check all were able to correctly identify the correct target.

Regarding high blood pressure being preventable, after the check 96% (n=51/53) were able to identify that hypertension was preventable. The same amount was able to more clearly identify where to have their blood pressure checked.

With regards to AF, the amount who agreed they had heard of it almost doubled after the service, with 89% (n=47/53) saying they recognised the term. The knowledge and awareness shifted by over 4 points as a result of the BP+ check.

Customer satisfaction survey

From the 100 responses received 20 stated they had been advised to see their GP for a follow up appointment. However, none of these 20 gave a time scale for the follow up. The survey did not capture if they had actually had an appointment. From the 100 responses, when asked whether they had been prescribed or had a change to their anticoagulant or antihypertensive medication, all the respondents (100%) chose the option 'no change/not taking medication.' The survey did not capture how many were taking medication prior to the service.

On a scale of 0-100 where 0 was no change and 100 was a significant increase in knowledge, the average score was 55.9%, with scores between 0 to 100% being given.

When asked if the BP+ session helped to understand the changes they could make to reduce your risk of heart attack or stroke almost half said they knew what to do and were planning to make a change. In addition, 43% also said they know what they should be doing to reduce their personal risks.

On a scale of 0-100 where 0 was no likely and 100 was extremely likely, when asked how likely they were to recommend BP+ to friends & family the average score was 81.5%, with scores ranging from 3 to 100.

Pharmacy evaluation questionnaire

There were 13 responses from the pharmacies to complete the evaluation questionnaire, giving a response rate of 57% from the 23 pharmacies.

When asked why they signed up for the service, it was mainly to support patients, provide services and improve health outcomes. Providing services is also an income generation for the pharmacy. When asked how the service had been promoted in the pharmacy pharmacies were able to pick more than one option. Of the 13 all (100%) said they had used an advert in the pharmacy. A large number of pharmacies (85%, n=11) stated they initiated the service after a conversation with a patient buying a product and over half (63%, n=8) had recruited from prescriptions. From the 13 pharmacies that responded there were between 1 and 7 members of staff trained to deliver the service. When asked how long each check took in the pharmacy all took over 5 minutes, but the maximum length stated was 20 minutes. Between 6-10 minutes was the most frequent amount of time stated. The pharmacies were asked to identify any other services they referred patients to during the BP+ check. Flu vaccination was the most common service referred to, followed by stop smoking. Patients agreed to carry out lifestyle recommendations as a result of the BP+ service. Obviously we cannot quantify if they did indeed complete the step, but as identified by the pharmacies, during the service changing

diet and increasing exercise were common activities patients agreed to start after the service. Once again, vaccination was the lowest change.

All 13 of the pharmacies stated that they used PharmOutcomes to share outcomes with the GP. Over a quarter (31%, n=4/13) also followed up with email and a few followed up with letter. With regard to sharing outcomes, comments from pharmacies included a follow up phone call being completed if the referral was urgent. When asked about referrals to the GP and the length of time for the patient to get an appointment over half of pharmacies (64%, n=7/13) reported patients having to wait 2-3 days for an appointment with only 1 pharmacy stating the patient was seen within a day. Pharmacies commented that the very urgent referrals made directly by the pharmacist to the GP were responded to faster. With regards to referral after AF identification, referral appears to be quicker with 5 pharmacies reporting 'a day' and 5 others reporting '2-3 days.'

There were 7 pharmacies who responded that they were aware of medication being initiated after diagnosis, with 5 saying there were not aware of any medication being started. Other conditions identified as part of the service were stated as palpitations, bradycardia, migraine, diabetes, angina and heart failure.

When ranking the usefulness of various elements of the service (where 1 is not at all useful and 10 is extremely useful) support available and training received scored an average of 8.5 out of 10. Promotional material received only scores an average of 6.5 out of 10. When looking at further elements of the service, where 1 is not at all and 10 is very, pharmacies scored 9.4 out of 10 for both having the knowledge and confidence to run the service. Equipment and paperwork being easy to use and complete also scored well. When thinking about the overall benefits of the service, where 1 is low and 10 is high, the benefit to patients was evident, scoring an average of 9 out of 10. Engagement of local GPs scored lowest at 6 out of 10.

When asked about enablers for the service, pharmacies were able to choose more than one option. No one enabler was agreed by all pharmacies, but the biggest enabler identified was 'engaged team' with 10 out 13 pharmacies (77%) stating this. Payment for the service was also a key enabler along with receptive patients and trained staff. When asked about barriers for the service all 13 pharmacies (100%) agreed that COVID-19 had been the biggest barrier to rollout of the service. Interestingly only 2 other barriers (pressure to deliver other services, and limited eligible patients) scored just over 50%. This shows that the majority of pharmacies had few barriers to overcome.

When asked about resources that were used in the pharmacy but were not accounted for in service specification, time taken to recruit patients was mentioned. Pharmacies also used cardiology and hypertension education posters, cardiology Apps showing AF and normal heart/cardiac function, hand gel (to improve the connection to the devices) along with training manuals from supplies and online training from websites.

Follow up interviews with pharmacies

A total of 11 interviews were completed with pharmacies who had been active using the BP+ service. Saturation of themes was achieved with this sample size.

Motivation to participate in the service was predominantly to support the community in diagnosis of cardiovascular disease and to enhance current services completed in the pharmacy. Extra income was also a motivator. Overall the pharmacy team have been positive about the staff involvement in the service, although some have needed extra support to identify potential participants, especially to fit the specific criteria for the BP Plus service. Pharmacies

used various methods to identify appropriate patients for the service, including marking prescriptions, and just opportunistically asking patients. Patients perceived the service well, enjoying getting a free check, and the use of technology was a positive element of the service.

Lifestyle factors were discussed during interventions, and various resources were used to support patients to understand the implications of lifestyle changes. The local GPs seem to have been overall supportive of the service, and since the start of the COVID-19 pandemic have been referring more patients to the pharmacies.

Staff engagement was a key enabler of the service. Whilst time was a barrier to the service, Covid has given people more time to focus on what is important for their health, with better education of the public and quieter pharmacies also had the time to deliver the service. Looking back since the start of the service the biggest barrier to delivery was covid, as this reduced footfall and capacity. The time taken to complete the service was a barrier for a minority. Patient engagement and eligibility were also cited as barriers, along with the occasional outage of the technology.

When asked what further support was needed if the service was going to be recommissioned, some were happy with current support. Expansion of the categories eligibility was suggested, along with enhanced marketing, and additional training updates. When asked about what advice the providers in the pilot would give to others the main points were regarding how easy the service was to run, and the added benefits of it to the community and team. The comments also commented on using the service as a gateway to other services.

Discussion

The blood pressure plus service, although hindered by the COVID-19 pandemic was piloted successfully in pharmacies across Surrey Heartlands. Patients were identified with both hypertension and AF, with this saving patients from future strokes, and saving future costs to the healthcare system through the earlier initiation of treatment. Pharmacies are well placed to offer blood pressure checks, as they are accessible to the public. The blood pressure plus was quick and easy to administer, and patients benefitted from knowing more about their blood pressure results but also understanding the impact of their lifestyles on their outcomes. The knowledge increase seen by patients after the intervention has been clearly seen. When looking at table 20 it is seen that all proposed outcomes were achieved for the service.

COVID-19 was the key barrier for the roll out of the pilot as checks were stopped as a result of social distancing. A small recovery to interventions occurred in 2021, but this was not back to pre-pandemic levels. GPs who were not seeing patients face-to-face during the pandemic also realised the value of pharmacies being able to complete a blood pressure check. Enablers for the service were engaged and well-trained teams.

Pharmacies were supportive and positive about the service, although some had limited follow up with patients. Pharmacies understood the importance of the service in patient care and overall prevention of disease. Training and the support available was rated well, although there is potential for more recruitment and patient education material. Expanding the service to younger patients, for example those who need blood pressure checks for contraceptives would take pressure off GPs, and also allow a more accessible service for the wider population. Linking to other services, or being a gateway to other services e.g. the NHS health check are considerations for the future.

When looking at deprivation, the postcodes in Surrey Heartlands have 5.9% of their wards classified as being in IMD decile 1-4 (none are in decile 1).[8] From the BP+ service 7.8% of those who undertook the service fell into IMD decile 1-4 so the service was able to capture and support those in less deprived areas.

Key Outcomes of the service

When reviewing the key outcomes of the project a summary of the findings are recorded below:

Proposed outcome	Key results
To reduce the burden of ill-health and deaths caused by hypertension and AF	From the patients tested 20% were identified with hypertension. 15 patients had suspected AF identified. It is expected that 3.96 strokes were prevented. Patients were also counselled and referred to services e.g. smoking cessation that would impact on overall cardiovascular risk.
To increase the awareness amongst citizens of the link between the conditions and serious cardiac events such as stroke	Patient surveys showed an increase in understanding of conditions and risk factors. Almost all were able to identify key risk factors for cardiovascular disease after the intervention.
To increase the number of people who "know their numbers" i.e. have opportunity to check their blood pressure and pulse.	A total of 4591 checks were completed. From patient survey data all those who responded (n=53) were able to identify their blood pressure result after the intervention.
To increase citizens capacity (in terms of knowledge and skills) to manage/prevent high blood pressure through lifestyle modifications	The results show multiple referrals to services to support lifestyle changed. Almost half of those asked in the customer satisfaction survey (46%, n=46/100) planned to make a change to reduce their risk of cardiovascular disease.
To increase the number of citizens who have hypertension or AF who are actually diagnosed.	Using the service 20% of patients were diagnosed with suspected hypertension (916/4591). Less than 5% identified with an irregular pulse (15/274) were diagnosed with suspected AF.
To ensure that these aims are equitable across Surrey Heartlands in relation to CVD need in order to reduce CVD-related health inequalities	The interventions numbers by pharmacy were varied. However, 7.8% of those who undertook the service fell into IMD decile 1-4 (versus 5.9% of the local population in these groups). Therefore, those in less affluent areas were targeted successfully.

Considerations for future blood pressure services

- Link to other services already completed in pharmacies
- Ensure, where possible, an even spread of pharmacies across a locality

- Where the service specifications are not met, have a robust process in place to understand why and support the pharmacy
- Provide ongoing training on the service to cover turnover of colleagues
- Ensure sufficient resources and patient information leaflets are provided to the pharmacies
- Expand to include other patient groups
- Ensure communication of the service to local GPs
- Ensure a referral pathway to GP's which includes a post event message to understand the outcome from the referral
- Review how the service is marketed to the wider community not just those who visit the pharmacy
- Consider the aims of the pilot to ensure data collection and service processes will be able to answer the aims effectively
- Consider the evaluation outputs wanted at the start of the programme to ensure data is collected that will enable robust findings
- When considering the evaluation outputs consider GDPR issues initially and try and ensure there is more seamless access to data
- Consider follow up with patients and GPs to gather actual outputs from the service

Conclusion

The blood pressure plus service was well received by pharmacies and patients alike. Whilst the COVID-19 pandemic did not allow the full impact of the service to the shown, strokes and monetary savings for the sector have been achieved. All proposed outcomes were met for the programme. Pharmacies are well placed to offer services to patients, and continue to be a key part of the multidisciplinary healthcare team. Pharmacies are willing and able to provide services. Early buy in of other local services and providers, explaining key benefits and features of the blood pressure plus service is advised. Pharmacies are willing and able to participate in services, where training and resources are provided. Future pilots or services should ensure the metrics measured clearly correlate with the aims of the service, with follow up of patients, where possible, to ensure the full patient journey is captured.

Contents

Introduction

Cardiovascular disease (CVD) is still the leading cause of death in England causing 1 in 4 deaths.[1] The General Practice 5-year forward view[2] stated an ambition to transform how pharmacists, their teams and community pharmacy work as part of wider NHS services in their area. In the 2017 guidance Health matters: combating high blood pressure,[3] Public Health England recommend the use of community pharmacy for helping to detecting CVD risk factors.

The blood pressure plus service was launched in 27 community pharmacies across Surrey Heartlands Sustainability and transformation partnership (STP) in April 2019 as a pilot to improve detection and management of CVD risk conditions, specifically hypertension and atrial fibrillation. In Surrey, CVD is the leading cause of the gap in life expectancy between the most and least socio-economically deprived areas.[4]

Community pharmacies have been involved in identification of CVD since 2016 and the number is increasing.[5] The service was launched with an aim of early diagnosis of Blood Pressure and Atrial Fibrillation check, especially for local people to access the service and by working with local pharmacies, to reach out to people who may not have had recent contact with their GP or other healthcare professionals.

The government in their 10-year CVD ambitions would like to focus on increasing detection and therefore management of the cardiovascular ABC's; Atrial Fibrillation, Blood pressure and cholesterol.[6]

Increasing community awareness and testing opportunities is key to the plan.

The causes of CVD

- Hypertension (HTN) is the main cause of 45% of all coronary heart disease, 50% of strokes, 25% of chronic kidney disease and 8% of all dementia.
- Atrial Fibrillation (AF) is the most powerful single risk factor for suffering a deadly or debilitating stroke. Undiagnosed AF increases the risk of stroke by five times.

Rationale for the service in Surrey Heartlands

The Surrey Heartlands STP area covers three Clinical Commissioning Groups (CCGs); North West Surrey, Surrey Downs and Guildford & Waverley CCGs. During the course of the project the STP transitioned into an integrated care system (ICS); Surrey Heartlands Health and Care Partnership.[7]

Only around 6 out of every 10 people who have hypertension in Surrey Heartlands have been diagnosed, leaving more the 80 thousand people potentially unaware they have a condition that significantly raises their chances of a heart attack or stroke. At GP practice level, diagnosis rates can fall to as low as 46% for some practices.

Atrial Fibrillation is also under-diagnosed across Surrey Heartlands, with around one third of people suffering from the condition unaware and undiagnosed.

Using the NHS Right Care approach, Cardiovascular Disease (CVD) has been highlighted as an area with opportunities to improve quality and outcomes across Surrey Heartlands

Integrated Care System.

CVD is of course strongly related to lifestyle factors such as smoking, weight and inactivity. Please note that the **primary prevention** of these conditions and subsequent CVD is an important part of Surrey Heartlands Prevention mandate (through action on improving health-related lifestyles and the wider determinants of health). Surrey Heartlands CVD Prevention Core group has a focus on **secondary prevention** (improved detection and management of CVD risk conditions such as HTN and AF).

In Surrey, CVD is the leading cause of the gap in life expectancy between the most and least socio-economically deprived areas.

Blood pressure plus service

Aim of service intervention: improved detection and management of CVD risk conditions specifically hypertension and AF
Proposed outcomes of intervention: improved detection and improved management
Sites of intervention: Community pharmacies and workplaces

Eligibility: The service was available to Heartland residents aged over 35 years that have not already been diagnosed with or were receiving treatment for HTN, AF or any other CVD.

Inclusion criteria:

- Anyone who is aged 35 years and over
- Without known cardiovascular disease including high blood pressure (or are on treatment for high blood pressure), Atrial Fibrillation, Diabetes, Chronic Kidney Disease, Angina, Stroke, Transient Ischaemic Attack, Heart failure and Myocardial infarction.

Exclusion Criteria:

- Anyone under the age of 35 years of age
- Has diagnosed CVD disease
- Is on any cholesterol reducing medicine
- Pregnant women

Process: During the Blood Pressure Plus (BP+) check, a participant had their blood pressure taken in accordance with the NICE guidelines and were screened for AF using AliveCor. Results from those participating in the service were added to PharmOutcomes, an online platform for recording service provision.

The full service specification for the service in community pharmacy can be found in appendix 1.

Final pharmacies being used for the service

Throughout the service there were 23 community pharmacies involved in the pilot. A number of workplaces were also used to offer the service. All pharmacies within the Surrey Heartlands area were approached and expressions of interest were received from pharmacies who wanted to be part of the pilot. Where possible pharmacies were chosen for the BP+ service based on their proximity to areas of deprivation and the diagnosis rates of AF and hypertension

at nearby GP practices, however pharmacies were only used where expression of interest had been received. A map of the pharmacies can be seen in figure 1.

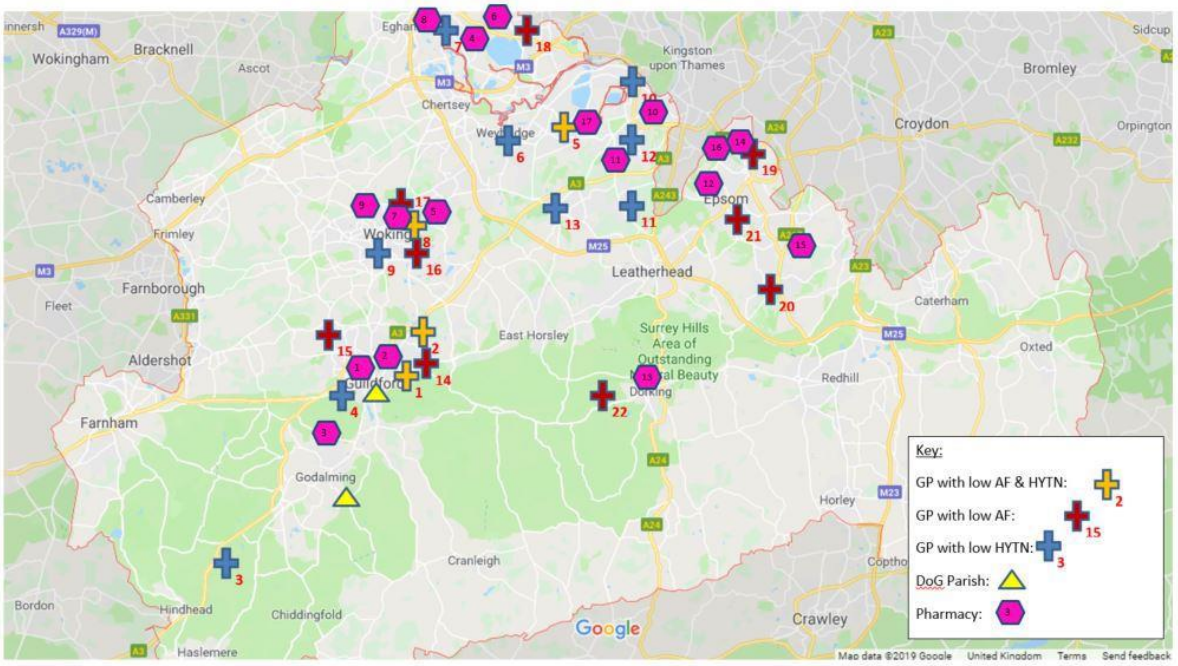


Figure 1: Map of participating pharmacies

Proposed outcomes for the project:

The overall outcome is to understand the link between early detection of cardiovascular disease, blood pressure and Atrial Fibrillation in patients, appropriate referral into the healthcare system in a timely manner and the benefits of providing preventative measure to patients to help them control and manage their long-term conditions.

Key proposed outcomes are as follows:

1) To reduce the burden of ill-health and deaths caused by hypertension and AF (i.e. reduce stroke and coronary heart disease events, such as myocardial infarction or death due to a cardiac cause)
2) To increase the awareness amongst citizens of the link between the conditions and serious cardiac events such as stroke
3) To increase the number of people who “know their numbers” i.e. have opportunity to check their blood pressure and pulse
4) To increase citizens capacity (in terms of knowledge and skills) to manage/prevent high blood pressure through lifestyle modifications
5) To increase the number of citizens who have hypertension or AF who are actually diagnosed
6) To ensure that these aims are equitable across Surrey Heartlands in relation to CVD need in order to reduce CVD-related health inequalities (i.e. the interventions are targeted)

Aims and objectives of evaluation

This study will look at the experience of pharmacies who have been participating in the Blood Pressure Plus scheme that was launched by Community Pharmacy Surrey and Sussex in 2019.

This project aims to determine insights from the pharmacy teams involved in the pilot to determine their opinions of the service, to explore learnings about the delivery of the service, outcomes achieved and any changes that are required going for future developments, in order to enhance and improve the current service. This will include exploring staff attitudes towards the service, promotion and uptake, referral pathways, patient outcomes and recommendations for the future from identified barriers and enablers.

Methodology

Research design

This was a mixed method study using data from multiple sources. Data collected on PharmOutcomes was analysed and presented. A survey collected experiences of pharmacies and follow up interviews were also completed with pharmacies. An interview was also completed with the commissioner of the service who was also involved in the initial workplace roll out.

PharmOutcomes was used throughout the service and collected demographic data about patients, along with results and data regarding referral. A patient survey was also used to capture views and knowledge of patients before and after the service. This can be found in appendix 2. Furthermore, a customer satisfaction survey was also used, a copy of which can be found in appendix 3.

The pharmacy survey consisted of 21 questions, with a mixture of tick box, Likert scale and free text responses to identify motivation for joining the service, experiences of running the service and recommendations for future services. At the end of the survey the pharmacy was asked to give contact details to participate in a follow up interview. A copy can be found in appendix 4.

The follow up telephone interview consisted of 14 open ended questions to gain further information, insights and case studies about the experiences of the pharmacies and the benefits and challenges of delivering the service. A copy of the questions can be found in appendix 5.

Ethics

The project gained ethics approval from Kingston University (Application 2735 January 2021).

Participant recruitment

All email communication was initiated by the project lead for Community Pharmacy Surrey and Sussex. Follow up communication to the pharmacies was sent from the researcher. Where pharmacies had not completed the survey they were emailed directly by the project lead to take part in an interview. To arrange a follow-up interview the pharmacy was emailed and/or phoned to arrange a suitable time. Once consent was given, phone interviews were completed with the interviews being recorded for verbatim transcription, prior to deletion.

Data analysis

PharmOutcomes and patient survey data was downloaded and analysed using Microsoft Excel using descriptive statistics. Statistical significance was established using descriptive statistics. For all statistical tests, $P<0.05$ was considered to indicate statistical significance within the reported results. The weighted average of the Likert score ratings were calculated for easier comparisons.

For follow up interviews, transcriptions were coded to identify themes. Some indicative quotes are included within the report, however full quotes from participants can be found in Appendix 6.

Results

Activity So far:

As of the end of March 2021 and the end of the commissioned service, 4591 BP+ checks had been completed. Of these, 3998 had been completed in community pharmacies, as seen in figure 2. The remaining 593 were completed as community outreach in workplaces.
Horton pharmacy completed by far the largest number of checks, with other pharmacies doing fewer checks.

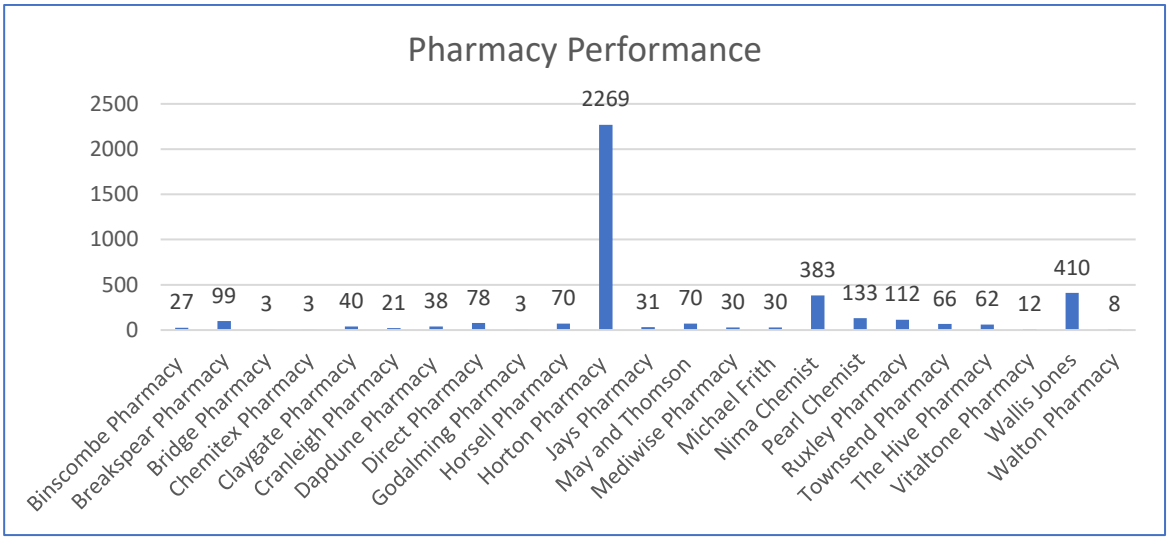


Figure 2: Number of BP+ checks by pharmacy

When looking at the number of interventions by month, there was a clear slowdown at the beginning of the COVID-19 pandemic in March 2020.

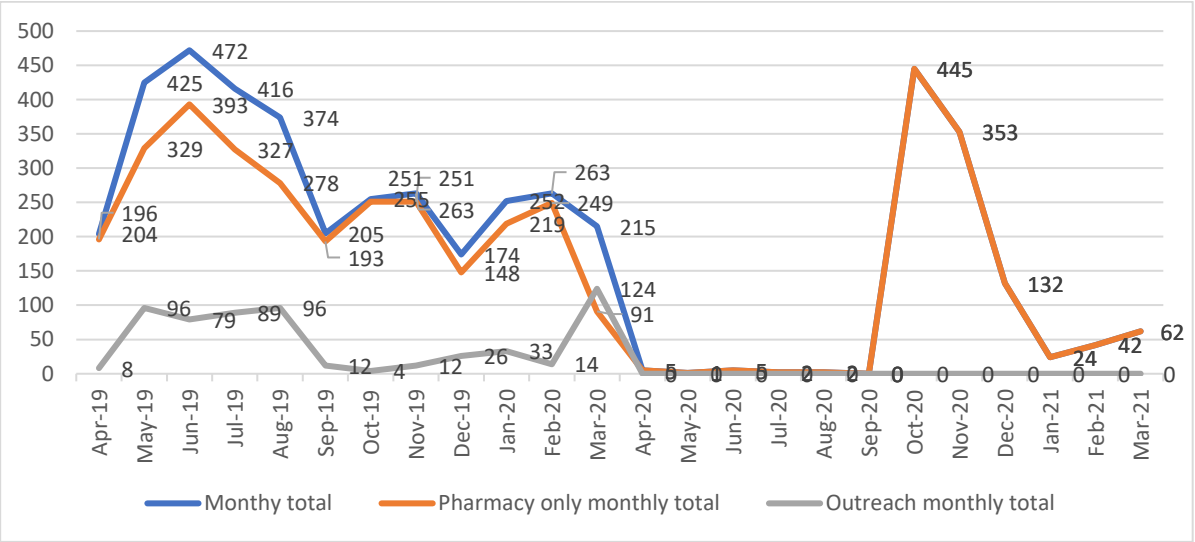


Figure 3: Total monthly BP+ checks

Demographics of participants

When looking at demographics of those who completed a BP+ check 64% (n=2938) of the patients were female (figure 4) with the mean age being between 45-54 (figure 5). The vast majority of participants were white British (figure 6) and from less deprived areas (figure 7).

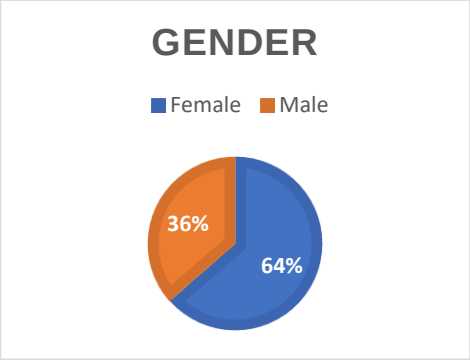


Figure 4: Gender of participants

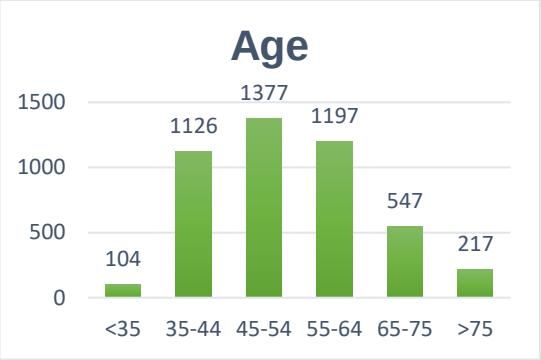


Figure 5: Age of participants

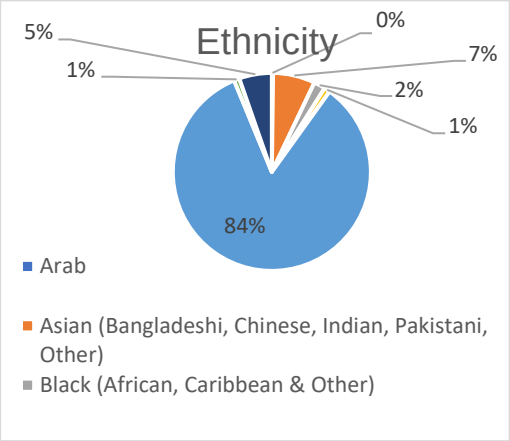


Figure 6: Ethnicity of participants

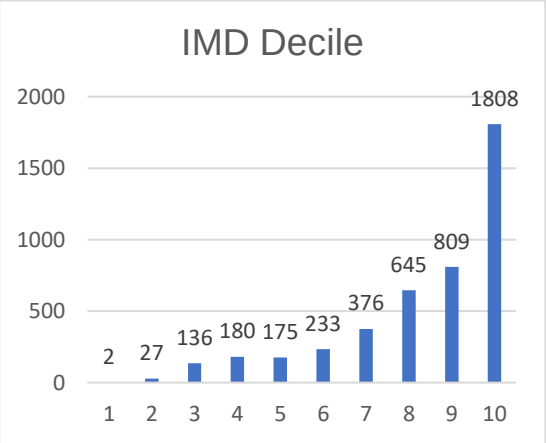


Figure 7: Index of Multiple Deprivation Decile

In terms of patient history, data was captured for 4395 participants. From this 339 (7.7%) stated they had a history of cardiovascular disease, 250 (5.7%) stated a history of diabetes and 120 (2.7%) stated a history of vascular disease. Smoking history was captured for 1084. Data for smoking status was only able to be captured starting in July 2020. Full breakdown of smoking status can be seen in figure 8. From the 1084 who were asked about smoking status there were only 59 current smokers (5.4%). Of the 59 current smokers, 14 (23.7%) consented to be referred to the Surrey stop smoking service. Direct referral was enabled as of September 2020.

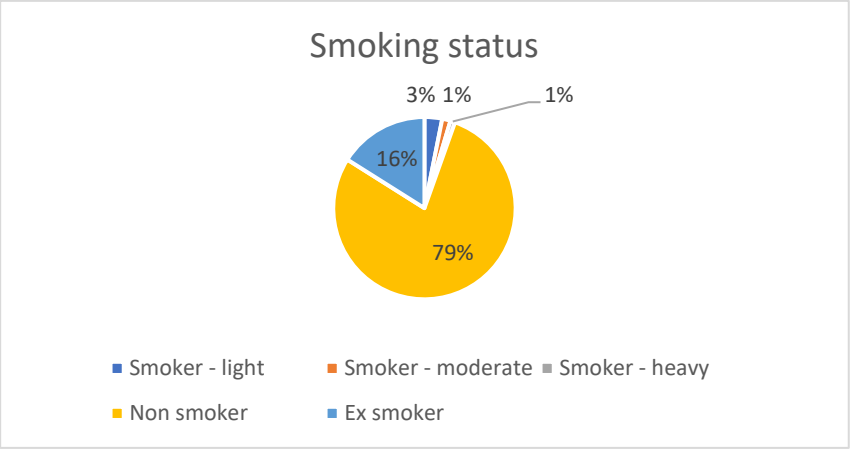


Figure 8: Smoking status

Issues identified - hypertension

From the 4591 checks completed a total of 916 (20%) patients had a blood pressure reading of 140/90 or over, with 225/4591 (5%) having a reading of 160/100 or over, therefore 80% of those having a check did NOT have suspected hypertension. Further breakdown is in figure 9 and figure 10.

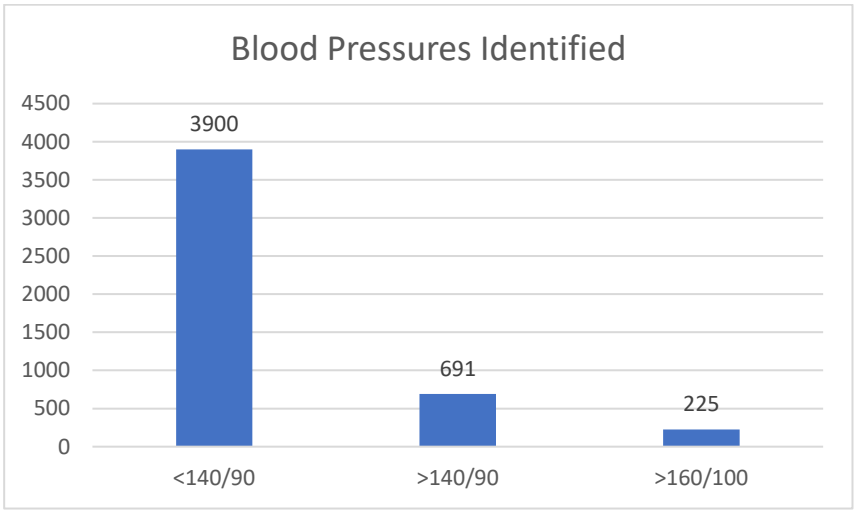


Figure 9: The results for blood pressure readings from the BP+ check

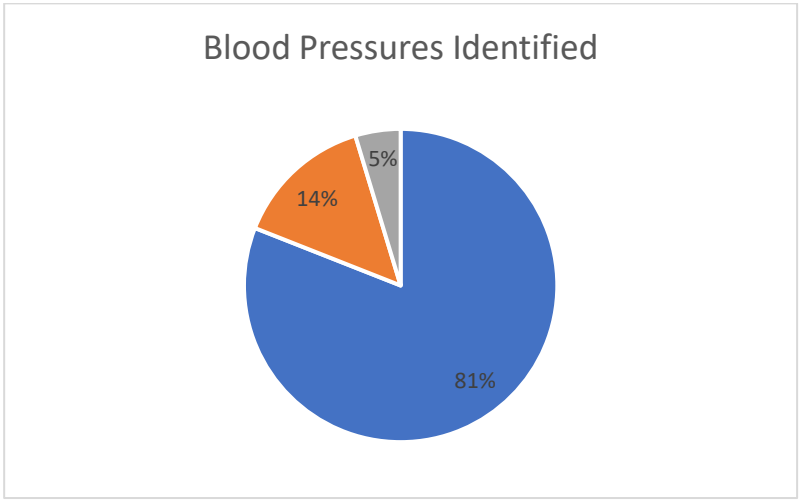


Figure 10: Breakdown by percentage for blood pressure readings from the BP+ check

The demographics of those who were diagnosed with high blood pressure are shown in table 1. the spread of gender was similar. Those in the age range 55-64 were most likely to be identified. A total of 64/691 (9.3%) and 21/225 (9.3%) over 160/100 were identified with blood pressure over 140/90 and from most deprived areas (Index of Multiple Deprivation (IMD) decile 1-4).

		BP >140/90 (n=691)	BP> 160/100 (n=225)
Gender	Male	358 (52%)	122 (54%)
	Female	333 (48%)	103 (46%)
Age	Less than 35	6 (0.9%)	1 (0.4%)
	35-44	110 (15.9%)	19 (8.4%)
	45-54	186 (26.9%)	59 (26.2%)
	55-64	199 (28.8%)	67 (29.9%)
	65-74	121 (17.5%)	47 (20.9%)
	75-84	28 (4.1%)	23 (10.2%)
	85 and over	11(1.6%)	9 (4%)
	Not given	30 (4.3%)	0 (0%)
Ethnicity	Any other ethnic group	4 (0.6%)	2 (0.9%)
	Arab	2 (0.3%)	0 (0%)
	Asian or Asian British - Bangladesh	1 (0.2%)	0 (0%)
	Asian or Asian British – Chinese	2 (0.3%)	0 (0%)
	Asian or Asian British – Indian	12 (1.8%)	3 (1.3%)
	Asian or Asian British - Other Asian background	13 (1.9%)	4 (1.8%)
	Asian or Asian British – Pakistani	7 (1.0%)	1 (0.4%)
	Black or Black British – African	15 (2.3%)	2 (0.9%)
	Black or Black British – Caribbean	3 (0.4%)	3 (1.3%)
	Black or Black British - Other black background	2 (0.3%)	0 (0%)
	Mixed - Other mixed groups	4 (0.6%)	2 (0.9%)
	Mixed - White and Black Caribbean	1 (0.1%)	1 (0.4%)
	Not stated	5 (0.8%)	2 (0.9%)
	Prefer not to say	24 (3.5%)	6 (2.8%)
	White – British	566 (81.3%)	189 (84%)
	White – Irish	4 (0.6%)	0 (0%)
	White – Other	26 (4.0%)	10 (4.4%)
IMD Decile	1	1 (0.1%)	0 (0%)
	2	4 (0.6%)	1 (0.4%)
	3	23 (3.3%)	8 (3.6%)
	4	36 (5.2%)	12 (5.3%)
	5	20 (2.9%)	7 (3.1%)
	6	35 (5.1%)	15 (6.7%)
	7	56 (8.1%)	13 (5.8%)
	8	104 (15.1%)	35 (15.6%)
	9	110 (15.9%)	41 (18.2%)
	10	270 (39.1%)	82 (36.4%)
	NA	32 (4.6%)	11 (4.9%)

Table 1: Breakdown of demographics of participants

Demographics for those identified who fell into IMD deciles 1-4 demographics are identified in table 2.

IMD Decile 1-4		BP >140/90 (n=64)	BP> 160/100 (n=21)
Gender	Male	32 (50%)	13 (62%)
	Female	32 (50%)	8 (38%)
Age	Less than 35	1(1.6%)	0 (0%)
	35-44	13 (20.3%)	5 (23.9%)
	45-54	20 (31.3%)	7 (33.3%)
	55-64	20 (31.3%)	4 (19%)
	65-74	7 (10.9%)	4 (19%)
	75-84	1 (1.6%)	0 (0%)
	85 and over	2 (3%)	1 (4.8%)
Ethnicity	Asian or Asian British – Chinese	1 (1.6%)	
	Asian or Asian British – Indian	1 (1.6%)	1 (4.8%)
	Asian or Asian British - Other Asian background	2 (3.1%)	2 (9.5%)
	Black or Black British – African	6 (9.4%)	
	Black or Black British - Caribbean		1 (4.8%)
	Not stated	2 (3.1%)	
	Prefer not to say		1 (4.8%)
	White – British	45 (73.4%)	13 (61.8%)
	White – Other	5 (7.8%)	3 (14.3%)

Table 2: Demographics of those identified with hypertension from IMD decile 1-4

When looking at checks carried out in total, and comparing this to those with suspected hypertension from each IMD Decile there were 2 participants from the most deprived decile who completed a check. Of these 1 (50%) was identified with suspected hypertension. The second highest percentage found by IMD decile were those from IMD decile where over a quarter were identified with suspected hypertension (48/180; 26/7%). Full breakdown can be seen in table 3. The number found from the different IMD deciles is not significantly significant, showing an even identification across groups.

IMD Decile	Total number identified with hypertension from IMD decile (n=916)	Number of participants from IMD decile (n=4396)	Identification % by IMD decile
1	1	2	50%
2	5	27	18.5%
3	31	136	22.8%
4	48	180	26.7%
5	27	175	15.4%
6	50	233	21.4%
7	69	376	18.4%
8	139	645	21.6%
9	151	809	18.7%
10	352	1808	19.5%

Table 3: Percentage of participants identified with hypertension by IMD decile

The number of those identified with hypertension by timescale is shown in figure 11. Similar to the total number of checks carried out over time seen in figure 3, no diagnoses were made during the core months of the COVID-19 pandemic, as no interventions were carried out.

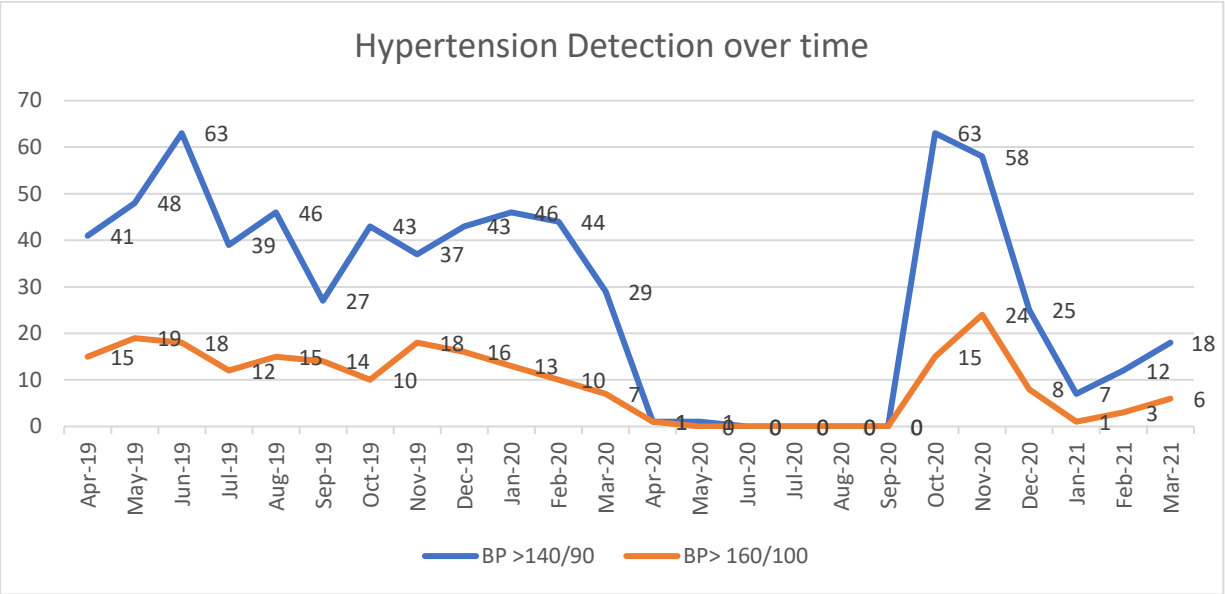


Figure 11: Hypertension detection over time

Issues identified – Atrial Fibrillation

In total from the manual pulse check there were 317 (6.9%) patients who went on to be tested using the AliveCor. Of these 317, 274 (86%) had a normal outcome, with 15 (4.7%) having possible AF detected. This is 0.3% of the 4691 patients who completed the service. Full breakdown can be seen in figure 12.

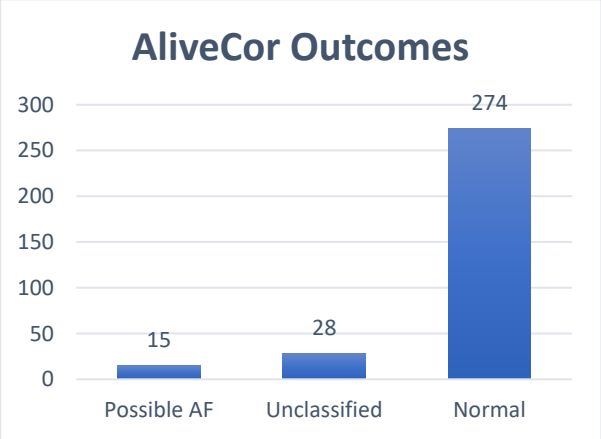


Figure 12: AliveCor Outcomes

Table 4 shows the demographics of all 15 who had suspected AF diagnosis from using AliveCor. Of the 15 possible detections 11 of these were found in a pharmacy setting. Looking at deprivation of the 15 possible detections only 1 was in the most deprived IMD decile. Of the 15 there were 9 (60%) who came from the least deprived areas (IMD decile 10). The cases identified over time are seen in figure 13.

Month of identification	Gender	Age	Ethnicity	Low systolic BP	Low diastolic BP	IMD Quintile
April 2019	Female	52	White - British	155	98	10
May 2019	Female	49	White - British	111	69	3
June 2019	Female	68	White - British	129	64	10
July 2019	Male	85+	White - British	118	55	n/a
July 2019	Female	59	White - British	120	89	6
July 2019	Male	34	Asian or Asian British - Pakistani	107	63	9
August 2019	Male	81	White - British	105	62	10
October 2019	Female	59	Any other ethnic group	109	72	10
October 2019	Male	39	Mixed - White and Black African	109	72	6
October 2019	Male	56	White - British	121	76	8
November 2019	Male	76	White - British	96	69	10
December 2019	Male	72	White - British	159	89	10
December 2019	Male	75	White - British	143	91	10
January 2020	Female	60	White - Other	100	51	10
March 2021	Female	47	Not stated	119	69	10

Table 4: Demographics of those identified with suspected AF

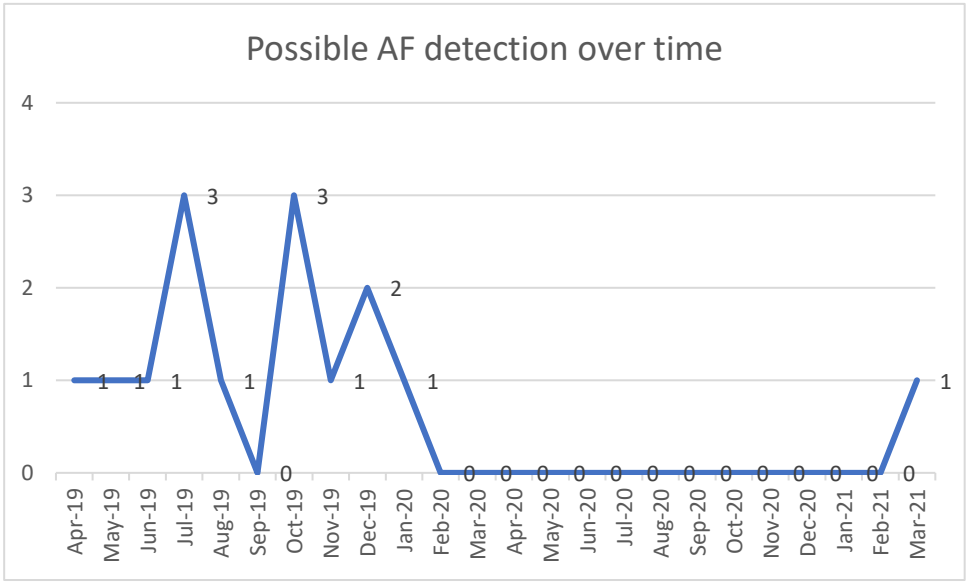


Figure 13: Possible AF detection over time

Key outcomes from the service

Looking at potential strokes saved, assuming that all the patients identified were started on the appropriate treatment. In total, 3.96 potential strokes were saved. This is based on NHS Size of the Prize estimates which say for every 25 patients identified with AF & anticoagulated 1 stroke is saved. From the 15 patients identified this would mean 0.6 strokes being prevented. For every 67 patients identified with hypertension (>160/100) and treated with anti-

hypertensives 1 stroke is saved. From the 225 patients identified therefore 3.36 strokes would be saved.

Overall, the return on investment for the project was £26,171. This is based on Public Health England calculations that each case of hypertension (>160/100) found and treated to target avoids costs of £250 to health and social scare. For the 225 cases identified this would save £56,250. There is a cost avoidance of £671 for each AF case based on imperial college AF impact model, therefore for the 15 identified cases £10,065 worth of cost would be avoided. Therefore, there are total savings to the system of £66316. Taking away the total costs to run the project of £40,144 this gives a return of investment of £26,171.

Strokes saved: 3.96	Return on investment: £26,171

Figure 14: Key outcomes from the service

It should be noted that due to data protection issues, although the numbers above are the potential numbers saved, we are unable to give complete numbers of actual numbers treated as a result of the service. For future services a follow up of the patient journey would be useful, to ensure GP and patient outcomes are recorded.

Patient survey data

There were 53 responses from patients using a pre and post assessment questionnaire.

From the results 100% of the respondents (n=53) stated that after the check they knew their blood pressure (table 5) with an increase in knowledge seen with less being unsure about the presentation of symptoms after the check (table 6).

	Before	After
Yes	8 (15%)	53 (100%)
No	45 (85%)	0 (0%)

Table 5: Responses to the question 'I know what my blood pressure is?'

	Before	After
Yes	29 (55%)	26 (49%)
No	8 (15%)	25 (47%)
Not sure	16 (30%)	2 (4%)

Table 6: Reponses to the question 'High blood pressure has symptoms?'

Table 7 identifies the knowledge about risk factors for high blood pressure. There was an increase seen for all answers, except knowledge regarding family history.

	Before	After
Smoking	49/53 (92%)	53/53 (100%)
Inactivity	42/49 (93%)	51/53 (96%)
Eating foods with high salt content	50/55 (91%)	53/53 (100%)
Family History	46/53 (87%)	46/53 (87%)
High alcohol consumption	44/53 (83%)	51/53 (96%)
Obesity	49/53 (92%)	50/53 (94%)

Table 7: Responses to the question 'Which of the following increases the risk of getting high blood pressure?'

When asked what was considered high blood pressure before the check 37 (70%) were unsure with 5 stating 120/80 and all others stating 140/80 or 140/90. After the check all were able to correctly identify the correct target.

Regarding high blood pressure being preventable, after the check 96% (n=51/53) were able to identify that hypertension was preventable. The same amount was able to more clearly identify where to have their blood pressure checked. Full responses can be seen in tables 8 and 9.

	Before	After
Yes	38 (71%)	51 (96%)
No	2 (4%)	1 (2%)
Not sure	13 (25%)	1 (2%)

Table 8: Responses to the question 'High blood pressure is preventable?'

	Before	After
Yes	43 (81%)	51 (96%)
No	3 (6%)	1 (2%)
Not sure	7 (13%)	1 (2%)

Table 9: Responses to the question 'I know where I can have my blood pressure checked?'

There was an increase in knowledge and awareness because of the service as seen in table 10.

	Before	After
Weighted mean (out of 10)	5.13	7.70

Table 10: Knowledge and awareness of blood pressure before and after the BP+ check

With regards to AF, the amount who agreed they had heard of it almost doubled after the service, with 89% (n=47/53) saying they recognised the term. The knowledge and awareness shifted by over 4 points as a result of the BP+ check. Full responses can be seen in tables 11 and 12.

	Before	After
Yes	24 (45%)	47 (89%)
No	22 (42%)	5 (9%)
Not sure	7 (13%)	1 (2%)

Table 11: Responses to the question 'Have you heard of AF before?'

	Before	After
Weighted mean	2.42	6.79

Table 12: Knowledge and awareness of atrial fibrillation before and after the BP+ check

Customer satisfaction survey

From the 100 responses received 20 stated they had been advised to see their GP for a follow up appointment. However, none of these 20 gave a time scale for the follow up. The survey did not capture if they had actually had an appointment. From the 100 responses, when asked whether they had been prescribed or had a change to their anticoagulant or antihypertensive medication, all the respondents (100%) chose the option 'no change/not taking medication.' The survey did not capture how many were taking medication prior to the service.

On a scale of 0-100 where 0 was no change and 100 was a significant increase in knowledge, the average score was 55.9%, with scores between 0 to 100% being given.

When asked if the BP+ session helped to understand the changes they could make to reduce your risk of heart attack or stroke almost half said they knew what to do and were planning to make a change. In addition, 43% also said they know what they should be doing to reduce their personal risks. Full breakdown can be seen in table 13.

Response	Number
Yes: And I plan to make a change	46 (46%)
Yes: I'm not ready to change yet	6 (6%)
No: I don't know what changes I could make	2 (2%)
No: I already know what I should do	43 (43%)
Don't Know	1 (1%)

Table 13: Knowledge of what to do to reduce risks of heart attack or stroke

On a scale of 0-100 where 0 was no likely and 100 was extremely likely, when asked how likely they were to recommend BP+ to friends & family the average score was 81.5%, with scores ranging from 3 to 100.

Of the respondents, 41 took place in a pharmacy and 55 stated workplaces. The remaining 4 did not state where their intervention took place. Some suggestions on how BP+ could be improved are given below in figure 15. Many wanted additional cholesterol checks completed at the same time. Many comments also commented on the positive aspects of the service. The full selection of comments can be found in appendix 7.

- Chair was facing the wrong way so had to bend arm towards person taking BP
- Cholesterol testing as well, would have been informative
- Give out more information/leaflet on how to improve BP through diet and exercise
- Improved technology
- It would be useful to include a cholesterol test to give a fuller picture
- Not sure of the professional status of the person during the BP check as they didn't seem to me to know
- Perhaps supply visitors with some written references as to what is "normal"
- Quick & Easy
- What a normal BP reading was although obviously had the information to see if it was abnormal.
- Would have liked to have cholesterol tested also

Figure 15: Suggestions from patients about how BP+ could be improved

Evaluation questionnaire

There were 13 responses from the pharmacies to complete the evaluation questionnaire, giving a response rate of 57% from the 23 pharmacies.

When asked why they signed up for the service, it was mainly to support patients, provide services and improve health outcomes. Providing services is also an income generation for the pharmacy.

The responses for why pharmacies chose to sign up are given in figure 16.

- A valuable service in public health and the prevention of the debilitating condition, stroke
- Add another much-needed service for the patients in our areas
- Additional funding stream. Good use of consulting room. Professionally stimulating
- Health promotion
- It was a new service linked to blood pressure which is very prevalent in our area and in the UK. Interested to start something new.
- Keen to provide local services, especially around preventative measures.
- Provide extra service
- Service to the patients
- The need to branch out and try something different
- To help our patients identify whether they have high BP or AF
- To improve the health outcomes of our local community and educate them on better health in the long term
- We have a specialist interest in cardiovascular disease/cardiology
- We were one of the pharmacies that ran the pilot for the service

Figure 16: Reasons for pharmacies signing up to deliver the service

When asked how the service had been promoted in the pharmacy pharmacies were able to pick more than one option. Of the 13 all (100%) said they had used an advert in the pharmacy. A large amount of pharmacies (85%, n=11) stated they initiated the service after a conversation with a patient buying a product and over half (63%, n=8) had recruited from prescriptions. The 2 ‘others’ were ‘During other clinics’ and ‘Inform local GP surgeries of the service.’ Full results can be seen in figure 17.

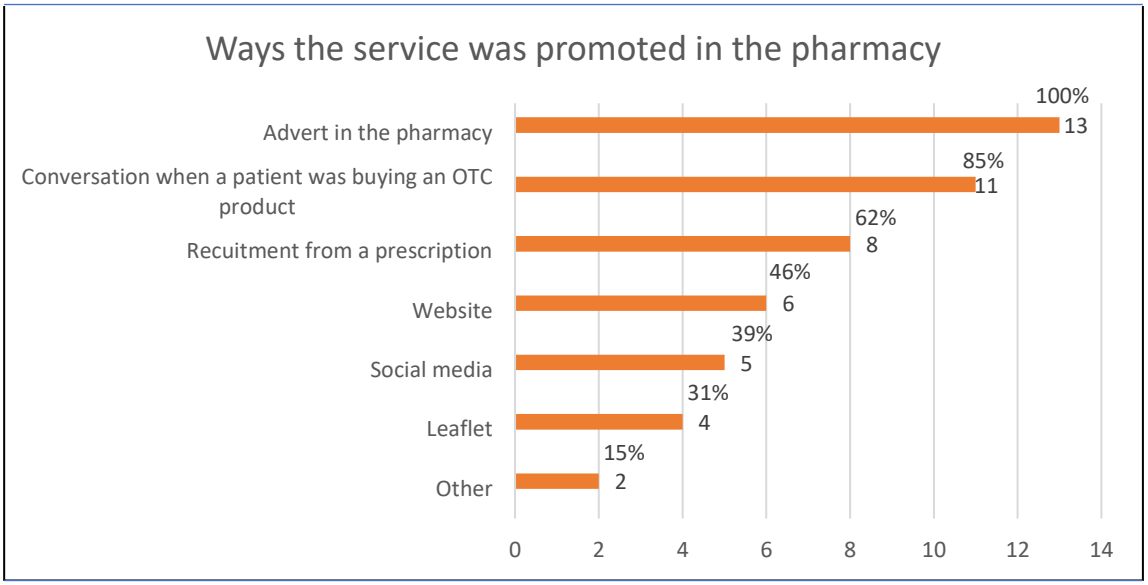


Figure 17: Ways the service was promoted in the pharmacy

From the 13 pharmacies that responded there were between 1 and 7 members of staff trained to deliver the service. From the breakdown seen in table 14 it is clear a wide range of roles were included in delivery, not just pharmacists.

Total number	Pharmacist	Pharmacy technician	Dispenser	Health Champion	Other
7	2	1	2	1	Pre-Registration Pharmacist
5	2		1	1	Pre-reg pharmacist
5	2	0	2	1	
5	1	2		1	Pre-reg pharmacist
4	2			1	Medicine Counter Assistant
4	1	1	1		Pre-reg pharmacist
3	2	1	0	0	0
3	2	0	0	1	
3	2			1	
3	1		1	1	
2	2				
2	2				
1	1	0	0	0	0

Table 14: Staff involved in the service, per pharmacy

When asked how long each check took in the pharmacy all took over 5 minutes, but the maximum length stated was 20 minutes. Between 6-10 minutes was the most frequent amount of time stated. Full results are in figure 18.

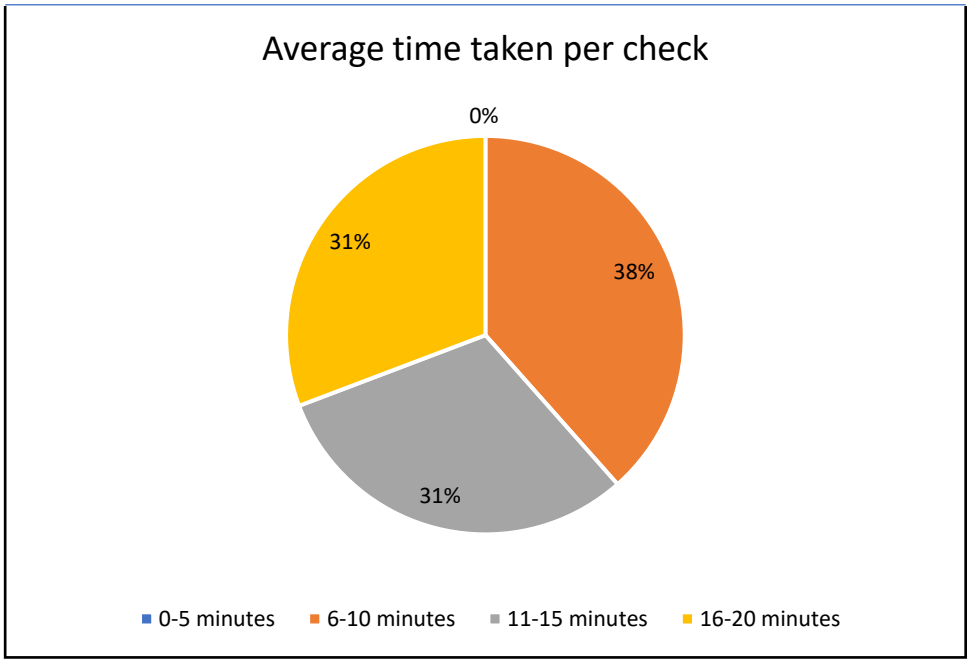


Figure 18: Average time taken per check (n=13)

The pharmacies were asked to identify any other services they referred patients to during the BP+ check. Flu vaccination was the most common service referred to, followed by stop smoking. As mentioned previously, as of September 2020 direct referral to Surrey stop smoking services could be made. Alcohol support and other vaccination were rarely or never referred to. Full results can be seen in table 15. Not all pharmacies gave responses for all services. Other services mentions that patients were referred to included GP, dietician and weight loss clinic.

	Always	Sometimes	Rarely	Never
Flu vaccination (n=12)	4 (33.3%)	5 (41.7%)	3 (0.25%)	
Stop smoking (n=13)	4 (30.8%)	4 (30.8%)	5 (38.4%)	
NHS health check (n=13)	3 (23.1%)	4 (30.8%)	3 (23.1%)	
Medication review (n=12)	2 (16.7%)	8 (66.7%)	1 (8.3%)	1 (8.3%)
Weight management (n=13)	2 (15.5%)	7 (53.5%)	2 (15.5%)	2 (15.5%)
Alcohol support (n=13)	2 (15.5%)	1 (7.7%)	5 (38.4%)	5 (38.4%)
Other vaccination (n=10)		1 (10%)	3 (30%)	6 (60%)

Table 15: Services patients were referred to as a results of the intervention

As seen in table 16 patients agreed to carry out lifestyle recommendations as a result of the BP+ service. Obviously we cannot quantify if they did indeed complete the step, but as identified by the pharmacies, during the service changing diet and increasing exercise were common activities patients agreed to start after the service. Once again, vaccination was the lowest change. Interestingly, in table 16 stop smoking was commonly advised but patients were less receptive to agreeing to that change. 'Improve stress levels' was an additional agreed action that was noted by one pharmacy. Not all pharmacies gave responses to each option.

	Always	Sometimes	Rarely	Never
Change diet (n=13)	5 (38.4%)	6 (46.2%)	1 (7.7%)	1 (7.7%)
Increase exercise (n=13)	3 (23.2%)	8 (61.3%)	2 (15.5%)	0
Get a flu vaccination (n=12)	3 (25%)	6 (50%)	3 (25%)	0
Lose weight (n=13)	2 (15.5%)	8 (61.3%)	2 (15.5%)	1 (7.7%)
Reduce alcohol consumption (n=13)	2 (15.5%)	6 (45.9%)	3 (23.1%)	2 (15.5%)
Stop smoking (n=13)	1 (7.7%)	7 (53.7%)	4 (15.5%)	1 (7.7%)
Get another vaccination (n=11)	0	1 (9.1%)	4 (36.4%)	6 (54.5%)

Table 16: Patient agreed actions as a result of the BP+ check

All 13 of the pharmacies stated that they used PharmOutcomes to share outcomes with the GP. Over a quarter (31%, n=4/13) also followed up with email and a few followed up with letter. Full details can be seen in figure 19. With regard to sharing outcomes, comments from pharmacies included a follow up phone call being completed if the referral was urgent. One pharmacy also commented that PharmOutcomes wouldn't print out the actual readings, and that there was difficulty in communication when the GP surgeries did not understand the BP+ service. When AF was detected, as this was rare there were also multiple stages to the service which became reliant on phone calls.

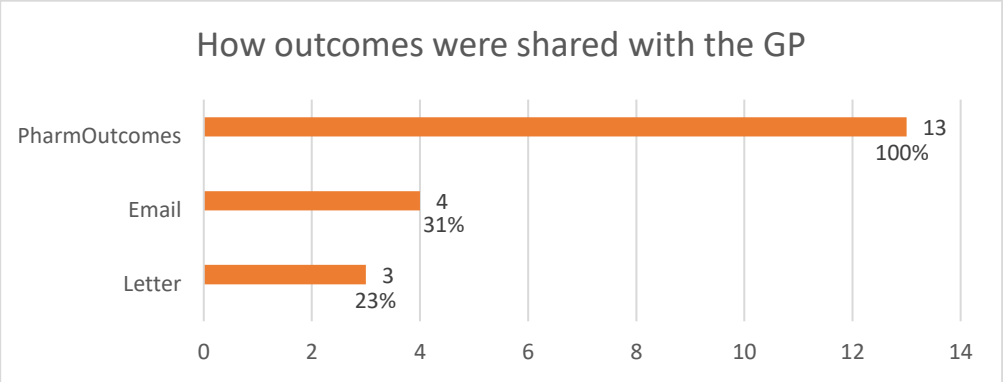


Figure 19: How outcomes were shared with the GP

When asked about referrals to the GP and the length of time for the patient to get an appointment over half of pharmacies (64%, n=7/13) reported patients having to wait 2-3 days for an appointment with only 1 pharmacy stating the patient was seen within a day. Full details can be seen in figure 20. Pharmacies commented that the very urgent referrals made directly by the pharmacist to the GP were responded to faster, and that, as seen in figure 18, backed up PharmOutcomes with email. There was also a comment that time to be seen varied after COVID-19.

With regards to referral after AF identification, referral appears to be quicker with 5 pharmacies reporting 'a day' and 5 others reporting '2-3 days.' The other pharmacies had not identified an AF case. Once again PharmOutcomes results were backed up by email.

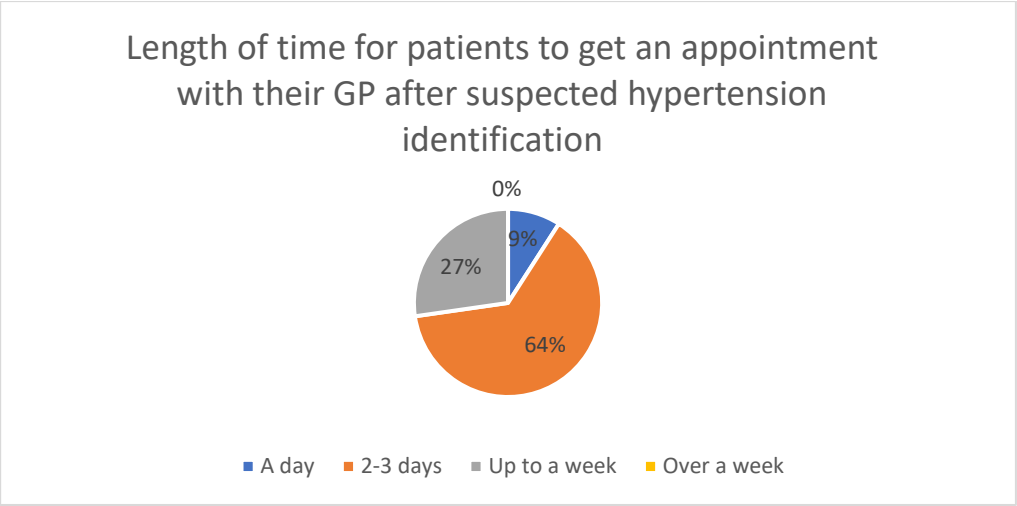


Figure 20: Length of time for patients to get an appointment with their GP after suspected hypertension identification

There were 7 pharmacies who responded that they were aware of medication being initiated after diagnosis, with 5 saying there were not aware of any medication being started.

For medication started amlodipine was mentioned 3 times, bisoprolol 3 times, losartan twice, ramipril once and rivaroxaban once. One other comment was more generic – 'Hypertensives - Calcium Channel blockers, beta blockers, ACEI'

Other conditions identified as part of the service were stated as palpitations, bradycardia, migraine, diabetes, angina and heart failure.

When ranking the usefulness of various elements of the service (where 1 is not at all useful and 10 is extremely useful) support available and training received scored an average of 8.5 out of 10. Promotional material received only scores an average of 6.5 out of 10. A full breakdown can be seen in table 17.

	1	2	3	4	5	6	7	8	9	10	Weighted mean
Support available from commissioners					1	1	1	1	6	3	8.5
Training received				1			3		4	5	8.5
Resources needed						2	2	1	6	2	8.3
Promotion material received	2			1	1	1	3		4	1	6.5

Table 17: Usefulness regarding elements of the service

When looking at further elements of the service, where 1 is not at all and 10 is very, pharmacies scored 9.4 out of 10 for both having the knowledge and confidence to run the service. Equipment and paperwork being easy to use and complete also scored well. Full results can be seen in table 18.

	1	2	3	4	5	6	7	8	9	10	Weighted mean
We had the required knowledge to run the service								2	4	7	9.4
We were confident to run the service								2	4	7	9.4
The paperwork associated with the service was easy to complete				1		1	1		4	6	8.7
The equipment was easy to use	1		1					2	2	7	8.3

Table 18: Feedback on the service

When thinking about the overall benefits of the service, where 1 is low and 10 is high, the benefit to patients was evident, scoring an average of 9 out of 10. Engagement of local GPs scored lowest at 6 out of 10. Full results can be seen in table 19.

	1	2	3	4	5	6	7	8	9	10	Weighted mean
Benefit to patients			1				1		3	8	9
Value for money as a pharmacy service	1						2	2	1	7	8.5
Engagement of team				1	1		2	1	3	5	8.3
Engagement of patients	1			2	1	2		1	1	5	7.2
Engagement of local GPs	3		1		1	1	1	2	2	2	6

Table 19: Feedback about the service

When asked about enablers for the service, pharmacies were able to choose more than one option. No one enabler was agreed by all pharmacies, but the biggest enabler identified was ‘engaged team’ with 10 out 13 pharmacies (77%) stating this. Payment for the service was also a key enabler along with receptive patients and trained staff. Full results can be seen in figure 21.

Listed under ‘other’ the following barrier was stated: ‘not very engaged - most people wanting the service had pre-existing diagnoses and were only interested in monitoring rather than discovering new conditions, or they were the wrong age.’

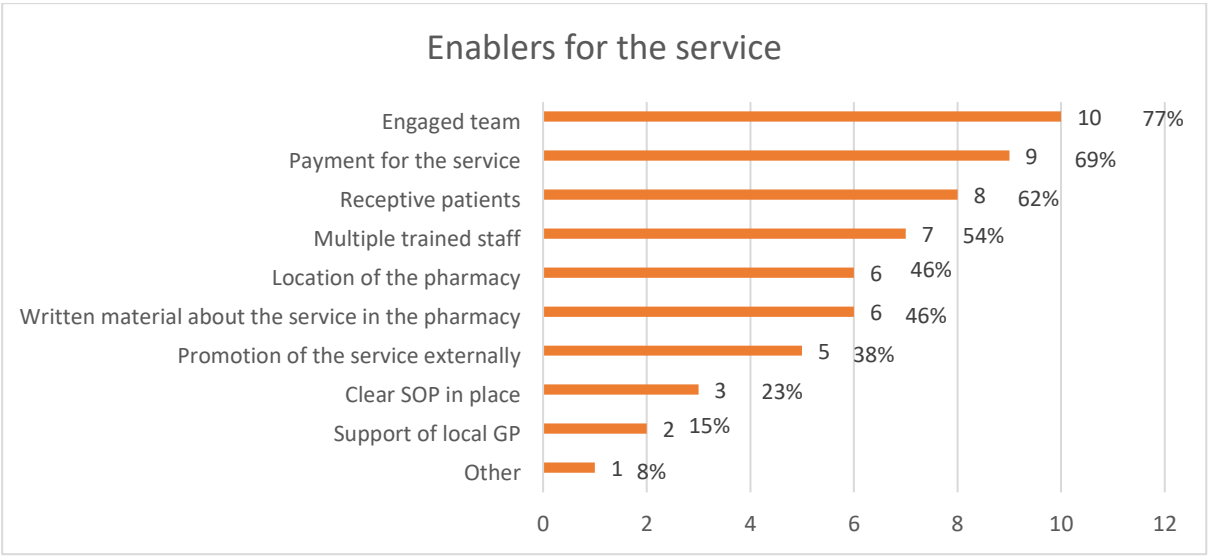


Figure 21: Enablers for the service

When asked about barriers for the service all 13 pharmacies (100%) agreed that COVID-19 had been the biggest barrier to rollout of the service. Interestingly only 2 other barriers (pressure to deliver other services, and limited eligible patients) scored just over 50%. This shows that the majority of pharmacies had few barriers to overcome. Full results can be seen in figure 22.

When asked about resources that were used in the pharmacy but were not accounted for in service specification, time taken to recruit patients was mentioned. Pharmacies also used cardiology and hypertension education posters, cardiology Apps showing AF and normal heart/cardiac function, hand gel (to improve the connection to the devices) along with training manuals from supplies and online training from websites.

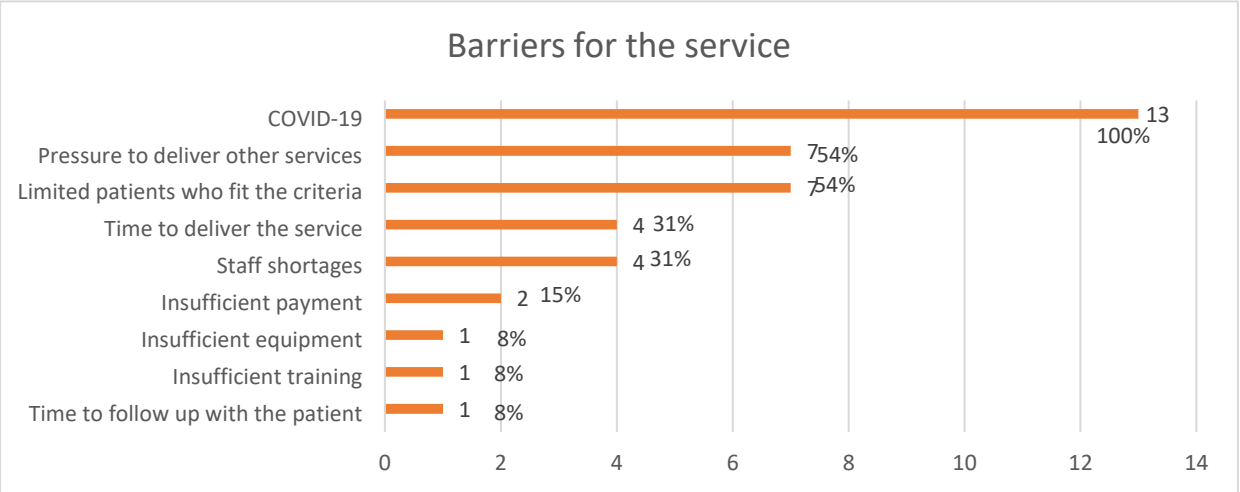


Figure 22: Barriers for the service

When asked about recommendations for any future roll outs the following comments were given about training (figure 23), resources (figure 24) and promotion (figure 25). The pharmacies overall appear happy with the training (echoing the result seen in table 17) although more training would be useful. Comments also echo the scores in table 17 showing more engagement material, promotion of the service and resources would be beneficial.

- A short visit to demonstrate equipment not sufficient. Far more training for staff is very necessary
- One to one training rather than group training
- Present training is good
- Too much to take in as delivered
- Training for detecting AF manually wasn't clear, and as not being very confident on this aspect made it a difficult decision to then go forward and do the electrical reading.
- Training was simple and effective - no further help needed
- Training was simple and straightforward
- Virtual training as an option? Ability to train others in the pharmacy

Figure 23: Recommendations for future roll outs – Training

- Additional promotional material for digital screen, leaflets, prescription bag stickers etc.
- Better awareness of the service and its benefits needed.
- Encourage GPs to send more ELIGIBLE patients to us.
- External promotions e.g., making public aware of the service, entitlements for taking part, advantages of taking part & how to take part.
- Get more GPs to buy into the service.
- Had requested larger posters that never arrived. No support offered for promotion.
- More advertising required nationally to make patients aware of the importance of the service.
- More Leaflets and Potentially providing the GP with more info re the service so we can get more referrals.
- Mostly by the Pharmacy team.
- Not paid enough to warrant the time it took to promote the service. Happy to deliver at that price if there was a queue of people actively sourcing it (possibly in response to a central/local media campaign) but we don't have the resources or skills to generate the demand.
- Promotional material to advertise or show patients.

Figure 24: Recommendations for future roll outs – Resources

- All available online?
- Educate & Make use of GP surgeries for appropriate referrals, rather than for them referring youngsters to have their BP checked for contraception prescribing & so on.
- More advertising required nationally to make patients aware of the importance of the service.
- Need training manuals that staff can refer to and study. More online resources.
- Resources to show patients before or after the test.
- We can print leaflets.

Figure 25: Recommendations for future roll outs – Promotion

Finally, pharmacies were asked if they had any further comments about the BP+ service. The majority of these were positive, with only a couple identifying that there was scope to amend the service in the future, as seen in previous comments. Full comments can be seen in figure 26.

- A great service overall, that unfortunately would have been impacted by the pandemic
- Extremely useful service as improves patient awareness. Better remuneration to allow more time to be dedicated to service. Very convenient for patients, especially when ordering repeat scripts and patients on renewing contraceptive who need BP 3-6 monthly. Cost savings to NHS in long term for early detection of health issues.
- Hard to find eligible patients as most people already take BP meds or are diabetic. More promotional material would have helped recruit those not on medication.
- It isn't what the consumer wants- opportunistic diabetes check then cholesterol check would be simpler/quicker.
- The BP+ service has been exceptional in promoting issues surrounding high blood pressure (as the silent killer) and AF. To use the opportunity to provide early detection of key cardiovascular issues that are very prominent amongst the local and larger population. It has helped many people obtain early diagnosis, detect inappropriate treatment due to symptoms detected as part of the service, as well support continuation of specific therapies. The GP surgeries have welcomed the service have been very supportive of it. It has been disappointing that the service is limited to specific area, as GP's have asked if we could support them with regards to Contraception reviews as BP is a key part of the review and safety of treatment.
- Very Good service.

Figure 26: Any other comments

Follow up interviews with pharmacies

A total of 11 interviews were completed with pharmacies who had been active using the BP+ service. Saturation of themes was achieved with this sample size.

Motivation to participate in the service was predominantly to support the community in diagnosis of cardiovascular disease and to enhance current services completed in the pharmacy. Extra income was also a motivator.

'I think it is a really good service. Blood pressure is a hidden disease. It is a silent killer. We do blood pressure testing all the time anyway, so when we were approached to do it we thought we would take advantage of the scheme. You get paid for it as well.' (Pharmacy 8)

'As a pharmacist I am just interested in doing anything that is different. I just wanted to do something for my patients that I could get involved in that was different to my ordinary job. So any service that I can do I always try. Anything new that is around I am game for it.' (Pharmacy 10)

'The motivation was really to get more people coming through the door to increase footfall in whatever way possible. This pharmacy has always been very service driven. We have taken part in the majority of the pilots that happened for any new service. I love doing that to be

honest with you. I love being involved in the infant stages of something that is coming. So really it was just that.' (Pharmacy 7)

'I would say we get a lot of people coming who need blood pressure checks anyway, especially at the moment with the surgeries not doing them. And then with the amount of questions we get with new blood pressure tablets or if they are not sure what they should be doing about their blood pressure, this service is good because we can find out, especially, when something doesn't seem quite right or its just not how it should be, at least we can relay that to them and it gives them an understanding and it is somewhere in between ourselves and the GP surgery. It is just ease of access for them, it is just something else we can offer on top of our services. I thought it was a good service to diagnose patients that may have high blood pressure or hypertension in the community.' (Pharmacy 5)

'So I think generally in pharmacy one of the things I always say is that we are underutilised so is a chance for us to show what we can do and what kind of numbers we could do and effect that can have on peoples health. So the staff found it very rewarding. They were able to find people who were unaware of high blood pressure and how we could help them.' (Pharmacy 2)

Overall the pharmacy team have been positive about the staff involvement in the service, although some have needed extra support to identify potential participants, especially to fit the specific criteria for the BP Plus service.

'I think my counter staff were a little bit worried about asking people, so I think they found that quite difficult. And then once lockdown came there was no one to ask, which is one of those things. So I think overcoming those barriers was difficult. The pre-reg was definitely up for it. That was not a problem. I was up for it. The other dispenser was fine, although she is not a counter type person, she likes her dossetts and running those. I think that was another difficulty, in that, with the dispensary being busy, it was mainly down to the counter staff to ask people who wanted their blood pressure taken, and the majority of people we picked weren't actually eligible.' (Pharmacy 10)

'Overall the service is alright, the main problem comes to get the people that's the main problem. The majority of the people are coming in are the ones who are not really for this service. People who are already on blood pressure tablets and who want their blood pressure checked. You want to get the right person in the right category and the right time, that's always the problem.' (Pharmacy 1)

'Everyone is happy that we are doing it and if anyone asks about blood pressure they always signpost me… We have posters up and social media, but our issue really is that we can only recruit those who are not on blood pressure tablets already and those that are over 35.' (Pharmacy 3)

'They loved it, they absolutely loved it. There was a financial incentive. As a group we did the bonus for any services done and that is a very big driving factor they all loved it they enjoyed it.' (Pharmacy 7)

Horton pharmacy completed the most checks. They commented on the reason why it was successful.

'The whole team were behind it. There was one point we were hitting some really good numbers and we would have get pizza on a Friday, so just to keep them motivated. At one point we were trying to do lots of flu vaccines at the same time. We were hitting about 20-30 blood pressure checks a day. Really good for the numbers side of things.'

Pharmacies used various methods to identify appropriate patients for the service, including marking prescriptions, and just opportunistically asking patients.

'Just mainly by looking at prescriptions or if someone is asking for a blood pressure check then we would speak to them at this point. We haven't been doing it since Covid.' (Pharmacy 9)

'They can't be on blood pressure medication before and they have to be over a certain age range, so we normally, when we do prescriptions, we normally see what medication people are on. If they are not on blood pressure medication and they fit the age range we put a stamp on it and that stamp can be seen by any member of staff, whether a counter assistant, pharmacist or someone giving out the prescription, so they can, at any point, ask the patient, 'by the way' would you like to have a blood pressure check.' (Pharmacy 8)

'It is done at the very beginning of dispensing. The dispensing stage itself. we use the variety of way to recruit. One of the ways was during the dispensing process, the dispenser, they would identify potential people. Aged 35 plus and not on any other heart medication already. So that is a very easy identification process. And they would identify. We had little stickers that we would stick on. We decided that the red colour dot would be the BP plus and that was highlighted. Counter assistants were trained that if they saw a red sticker they should immediately refer to one of the trained members. To be honest that recruited the maximum of the people we done. *The other way was opportunistic, and that was through posters in the pharmacy itself. We also had a note on our website, and we had leaflets we put in every bag. The majority were recruited through intervention on prescription.'* (Pharmacy 7)

Patients perceived the service well, enjoying getting a free check, and the use of technology was a positive element of the service.

'They were always happy to do it. It was good to get a blood pressure check done for free as well. It is always a good think. There was always positive feedback.' (Pharmacy 11)

'I mean, even the ones, that didn't quite qualify for it were amazed about the things you can do with a mobile phone. Good overall response no matter what we do. Even now, if people come in for blood pressure checks, although they are already on medication, we always make a point of doing the cardiocheck for them. They just love the gadget.' (Pharmacy 10)

'With the AF device, the people love it! Oh they love it. The fact that they are seeing that on my phone when they put their two fingers there. They think it is really different.
It is such a brilliant service. The ones that said yes they were so fascinated that we could do it. As I said before, they really liked the cardioapp, the fingertip app. They, when they were women, they asked their other halves to come in to get it done, because it is raising awareness. They were really impressed. I think a lot of people were very happy to help, happy to do it, happy to refer other people for it. They wanted more from the service.' (Pharmacy 3)

'It has been good. Definitely a good reaction. They are just grateful that we have the time for it

basically, that's all.' (Pharmacy 5)

Multiple case studies were shared about patients that had benefitted from the service.

'One particular patient. I know my patients really well, as I have been in the pharmacy for about ten years. There is one particular gentleman. He has now left his job as he is a full time carer for his wife. He's not on any medication but his wife is unfortunately on quite a few medications. And due to his wife's health degrading, and they have 2 kids, I think in their teens, and he also has to care for them. I think one of the daughters wasn't taking her mother's illness very well and she started playing up and everything. So I know him as a customer and know his whole family as he has been part of the community for so long. So I asked him if I could do his blood pressure. He said no to me twice. On the third time I was like 'come on, do you have a bit of time.' I was a bit persistent with this guy. He is a bit overweight, and he is a bit stressed all the time. Low and behold, obviously his blood pressure was high, and he also had atrial fibrillation. So I sent him straight to the doctors surgery. Sent the record straight away. They saw him the same day and did the 24 hour blood pressure monitor on him and he came and thanked me a few days later as he is now on blood pressure tablets and that has been a couple of years now. If I hadn't been persistent and kept asking him god knows what could have happened to me until now.' (Pharmacy 8)

'I was doing an MUR with someone and we talked about some of the medication he was on. It was a blood thinner and I offered to him to have his blood pressure taken and check his heart rate. It came out that there was something wrong with it and we sent that to the GP, we obviously forwarded it. The GP called him and they sent him for some tests to the hospital and he was referred to the specialist. So I am going to go to heaven, yes. I saved one person, yeah.' (Pharmacy 1)

'It has been very good. We have even found a few who have been referred to the GP. There was one patient who actually had a reading, which was extremely high, above 140. We told her she would need to see the GP as soon as possible. She was a bit hesitant to see the GP as she didn't want to take blood pressure medication, so I informed her what was possibly the drug that she would be taking, just explained to her it would be a calcium channel blocker or ACE inhibitor as she was over 55 it would be a calcium channel blocker.' (Pharmacy 4)

'The fact that they get three readings. We take the highest one of both and give them a record to take to the doctors. Now, we have actually found someone with AF, we found someone with extremely high blood pressure e.g. 190, so they have obviously been signposted to the correct people. The lady that had 190, she really stood out. Because it was consistent across three readings, and at that point I actually phoned the GP surgery straight away just to get some insight into their thinking and they were like 'A and E straight away.'… That happened a week before Christmas so I never managed to get back in touch with the person to find out the outcome.' (Pharmacy 3)

'A gentleman came in for his flu vaccine, over 50. He had received a letter from the government saying to have it. It was the first time he had had it ever as generally he always feels o.k. Blood pressure reading said that his blood pressure was a bit high, so we recommended he takes a log and takes it to his GP and we let the GP know too. The GP started him on medication. We also have the new medicines service. I wasn't actually involved in the blood pressure readings and all that but I was doing the NMS on him, and he was like 'it was all identified in the

pharmacy in the first place, so thanks for flagging this.' And we were checking on how he was getting on with his blood pressure medication and it was working, coming down. Not as much as he had wanted at the moment but he had only been taking it for 2 weeks at that point. It just shows how one service can lead to another service too.' (Pharmacy 2)

'I had one fairly recently. A few weeks ago. I had someone come in. he was a bit concerned about his pulse rate. He thought his heart was going a bit quicker, so obviously we took a blood pressure for him, and it turned out quite high. And his pulse turned out quite high as well, so we got him to come back on a couple of occasions during the same week so we could monitor. He was also going through quite a stressful time recently as well. Anyway, he came back a few times and it was still the same so we sent him to his GP. So he has done that and since then he has had, been prescribed a new medication for his blood pressure. Funny, just this morning I saw him for another check and it has come down quite nicely. He is very appreciative.' (Pharmacy 5)

'I think the point I made about the bradycardic one. That is a really good example of a young fit male who basically just had a history of migraines but he had a number of treatments for that one of which was beta blockers but he had issues of being bradycardic palpitations sometimes waking up in the middle of the night gasping for air. We said it is likely to do with his beta blockers so it's worth getting that checked out. we did indicate that he should be reviewed so he went in and had a review with the clinician, we had a chat with the GP they obviously had their medication reviewed and stopped and they came back and said they were feeling great and didn't have a migraine.' (Pharmacy 6)

'In the first few months of starting the service, we had one gentleman who we found with irregular pulse and his blood pressure was very high. We did three readings. Very very high. In the region of 180. So we said does he want to go back. He lived quite local. We asked him to come back in the evening as it was morning time and we would check again, and see if it is any different. He came back in the evening, same story. We referred straight to the GP and he is still on the same cocktail of drugs that he was put on at that point. It was one of the first. I think that motivated the staff even more because they could see they had done something and benefitted somebody. They watched the whole process. That was in the first few months of us starting the service. There is loyalty. He always comes to us for his prescriptions. He family comes to us. He always mentions that we brought this up. It was a case of 'I get these headaches, but I am not too sure.'' (Pharmacy 7)

Lifestyle factors were discussed during interventions, and various resources were used to support patients to understand the implications of lifestyle changes.

'To be honest a lot of people were aware of lifestyle and changes to make if they have to, the regular exercise, cutting down alcohol, eating healthy. I always used to use the NHS healthy lifestyle website. I used to talk to them first and then go in and talk to them using it as a reference. I used to do it alongside vitality healthchecks too. I did it alongside advising them to bring their blood pressure down. This service links in with others.' (Pharmacy 11)

'It really depends on the area that you work. In this area the majority of the people are educated sort of level so they have got good understanding about it anyway so you are reinforcing that yeah.' (Pharmacy 1)

'We have posters of high blood pressures and hypertension and we have added in some apps onto our ipad so when the patient comes in they can physically see what a good working heart looks like, one with atrial fibrillation and also we use graphics on the computer when we have taken the blood pressure to show that these are your numbers but what do they actually mean visually so we plot those numbers and show them where green is where Amber is but actually you were in the red zone. So that takes us to the next step of what we are actually going to do about it and how are we going to work with you to drive that down. what do we need to do to support you to do that. We then go into the full information be it lifestyle, drinking alcohol, all the other things that need to be talked about in relation to it.' (Pharmacy 6)

'We ordered lots of those booklets from the British heart foundation. They are very handy, and use very simple terms. No crazy terms or pharmacy or scientific terms. When it is broken down into simple terms people feel they can actually do it. Rather than just saying 'you need to change your lifestyle'. So those helped a great deal. I would vouch for those BHF leaflets.' (Pharmacy 7)

'The patients, when they see something is wrong then they do see it as a kick up the backside that maybe they shouldn't drink wine every night, or I should watch what I am eating, or go for a run or something like that. Also, they care about their partners quite a lot, and say, well if I get my partner on it, and that sort of thing. So it has really affected the local community and supported them to look after themselves a little better because they also know there is someone looking out for them.' (Pharmacy 8)

The local GPs seem to have been overall supportive of the service, and since the start of the COVID-19 pandemic have been referring more patients to the pharmacies.

'To be honest a lot of the surgeries around here, I used to have a lot of women coming in as they need to get their blood pressure checked for the pill, so I used to use that as an excuse to do blood pressure plus as well, as the doctors weren't doing it. Whilst they were there, I said quickly let's take your blood pressure, if they fit the criteria. I think the GPs were happy with it. Nothing bad.' (Pharmacy 11)

'The GPs are very receptive. As I said, I consulted them, and I have referred them to out of hours. I think it was a Saturday and Caterham Dean, our local hospital, they are doing an out of hours service, so I consulted the gentleman there, because I was quite worried about the person, but the GP was not worried and he thought he would be o.k. till Monday morning if nothing changes. So I think the GPs have probably realised how important pharmacies are in all aspects, just because of this pandemic.' (Pharmacy 3)

'All the feedback that we have had from the GP's has been really really positive. They appreciate the fact that this service is offered through community pharmacy and we are able to see patients whether they walk in or will have been referred. whether it be positive results or negative results and what interventions are required they have a really good basis to start that from, especially I would say where the readings have not been that great. it has supported the next steps.' (Pharmacy 6)

'The GPs are o.k. about it to be honest. It has taken away a lot of pressure from them, because it is just one of those extra things they have to put aside and ask a nurse or a health care

assistant to do. So obviously it only benefits a very small criteria of people but they were open to it. They never resisted which is always good. I don't think they actively referred anyone as such but they made it known that people could come down to the service.' (Pharmacy 7)

'At first they weren't really supportive, as their nurses do it as well, so they thought what is going on, why are you doing this but now, our local GPs have got used to it and now they are sending people to us and saying to people if they want their blood pressure checked they can go to the pharmacy. Initially it was a bit of a struggle as they were like 'why are you doing this?'' (Pharmacy 8)

There was only 1 independent prescriber pharmacist interviewed, who would not currently be confident prescribing as cardiovascular was not their specialist area, and they felt more training would be needed.

'I am. This is the thing. Regarding blood pressure I would probably be a little bit apprehensive. But having done, I am going to be quite honest here, I did my IP about 5 years ago. It was an eye opening experience, it was great. But I never came out confident enough to take it to the next level. If we can have some practical help with how, what to prescribe in the first instance and what to move on to, and how to do it. Obviously if you have swelling in the leg and things like that you are thinking about diuretics and things like that, but, there are some things I would be confident in prescribing but potentially not blood pressure.'

In addition there were another few independent prescribers in the pharmacies running the service.

'My wife is. She is very comfortable prescribing as she works in a surgery doing those kind of things. She would feel very comfortable. For myself I would need to work towards getting at least some sort of supplementary prescribing to do anything like that but I think we have that facility and we would be very happy to push that forward. At the moment we are transferring everything to the GP surgery for them to take on the responsibility.'

'I'm not but my colleague pharmacist is. My colleague specialist area is hypertension so that's what they did it in. We would encourage that we would be want to do that. Everything is good to undertake that anyway so they would love that.'

For those pharmacists who are not currently independent prescribers they were mostly receptive for future services to include prescribing, where possible.

'If it was to be added I think that would be really beneficial, it really would. It would eliminate the factor of having to include the GP surgery, like everything could just finish at the pharmacy. It would save time. It wouldn't make a huge difference but it would make a difference.' (Pharmacy 8)

'Prescribing is the future of pharmacy isn't it. I think anyone who is a pharmacist should be an independent prescriber, no matter what, anyway. I have always thought that. I would promote that and push all of my pharmacists to do that.' (Pharmacy 10)

'If I was, I think it would be really beneficial. I can certainly see it working in community pharmacy and I could see it as a good thing going forward.' (Pharmacy 5)

'No, but I think it would be great. It would be even more welcome. As I said earlier, to replace the journey and have an outcome from it is what motivates pharmacy staff more than anything else. Being able to see that journey completed with a positive outcome so I think if an independent prescriber was to take that last step in here as well, then, yeh. It would show tangible evidence of what we are doing.' (Pharmacy 7)

When asked what further support was needed if the service was going to be recommissioned, some were happy with current support. Expansion of the categories eligibility was suggested, along with enhanced marketing, and additional training updates. These comments echo the results seen in the pharmacy survey.

'Not really. Although they did say you could only check the blood pressure of certain categories so it was always hard to know who and what until you have taken them in and had a bit more of a conversation with them to find out that sort of information… When it is just general public you can't always just say 'let me check' and then say 'hold on, I can't do you.' It was a bit awkward.' (Pharmacy 9)

'Maybe like resources to help us promote it, so posters maybe, yeh, posters, leaflets just to let people know we are doing it, and for people carrying out, nothing that overlaps other things, so maybe clear guidelines, and made concise.' (Pharmacy 11)

'Well, the problem becomes, the group of people who visit the pharmacy and belong to the categories that are eligible after a while, you keep getting the same people in. There is a time limit that you can run this sort of thing properly. After that they say 'you asked me last time.' You see the same people so I don't know if it's a one year or a two year. You can't carry on doing it.' (Pharmacy 1)

'*I think it is quite good. I can't think of anything at the moment anyway. It is easy to use and straightforward to record. I am happy*.' (Pharmacy 5)

'Maybe regular little training updates, or training information. Particularly related to risk of cardiovascular disease, so, not percentages or anything, but say, for example, you can cut out, having blood pressure for so many years can cut out so many years. Cutting things out can reduce your risk by so many percent, they don't understand these terms, so a little bit of training like that. There was never really an update like that.' (Pharmacy 7)

Looking back since the start of the service the biggest barrier to delivery was covid, as this reduced footfall and capacity, echoing the barriers identified in figure 22. The time taken to complete the service was a barrier for a minority. Patient engagement and eligibility were also cited as barriers, along with the occasional outage of the technology. These findings echo those seen in the pharmacy questionnaire.

'Barriers would be covid and time. Patients are like 'how long will it take.' You say ten to fifteen minutes to rest before taking the blood pressure, and they say they don't have the time and want you to do it right now. Time is a big thing. And definitely covid.' (Pharmacy 8)

'Barriers I think, just some people didn't have time. They weren't interested or weren't aware

of the importance of blood pressure. I think that was the main thing. Also, getting all the staff members on board as well. Some people were wasting ten minutes on a blood pressure check and then by the time I came out there was a massive queue.' (Pharmacy 11)

'Barriers, erm. I would say maybe the patients not being aware of the categories sometimes. That is the only one I can think of. For example, sometimes they are already on blood pressure medication but they still want to do the service, or they might be under 35 and still want to do the service.' (Pharmacy 4)

'Barriers – I think the only thing that might cause a problem is the actual machine not working properly sometimes. But we have only rarely had that issue. I think that is the main barrier.' (Pharmacy 5)

'Barriers I think probably have been covid… Equally recruiting patients there is never going to be enough that you can do to educate and inform patients that you are running the service, getting support from stakeholders to say these are the pharmacies offering it and perhaps working with people like the British Heart Foundation or other associations that could help refer in to us. That would be great.' (Pharmacy 6)

'Covid was the barrier. Now our biggest barrier is that we are providing covid vaccinations in this pharmacy, so that has taken everything of our time, so if we want to do a service like this, we are doing some other enhanced services. It means we have to book in appointments, and we are limited with the time we have, as we can only do it when we have breaks from the covid vaccine. It still means we have to disinfect the whole area.' (Pharmacy 7)

Staff engagement was a key enabler of the service. Whilst time was a barrier to the service, Covid has given people more time to focus on what is important for their health, with better education of the public and quieter pharmacies also had the time to deliver the service. Like the barriers identified in the interviews, these findings echo those seen in the pharmacy questionnaire (figure 21).

'I think, it is selling it into staff. Once we had the one lady who came in with chocolates, I really did lay it on thick with the thank yous. It did make everyone glow, so there are definitely enablers there.' (Pharmacy 10)

'Really kind of making a way of staff understanding the benefits. That is where it stems from, isn't it. If they want to do it they will. If they don't want to, they just won't bother. In terms of getting people in, I think it depends on where the pharmacy is as well. In Banstead people are always conscious about their health. They always wanted to do health checks, or get their blood pressure checked, whereas I have worked in other places, and there, people don't know or don't care.' (Pharmacy 11)

'The enablers – I would say the team. Flagging people who are eligible, asking patients, yeh.' (Pharmacy 4)

'In terms of resources, here we are fairly well set up to deliver this sort of thing. We have the space and we have the time as well.' (Pharmacy 5)

'I think the enablers were general awareness. You know the shift has happened about people doing more exercise, better lifestyle. In such sections of the population that is a good thing to do, it keeps you in fashion. So I think that was a big thing. Like I say Covid has changed things. Before Covid everyone had an office job to do. They sat in offices for 8 and a half hours and couldn't get out so that was a barrier. They didn't have time to do anything. Obviously that isn't something we can solve. But it was a general, the first thing people said. So I don't think that counts anymore but the conditions are not different.' (Pharmacy 7)

When asked about what advice the providers in the pilot would give to others the main points were regarding how easy the service was to run, and the added benefits of it to the community and team. The comments also commented on using the service as a gateway to other services.

'Go straight in. dive in. it is a fun service, and easy to do. All staff members can take part and get involved which is nice. It is easy and doesn't take much time, and it is rewarding when you do find the patients that come back to tell you that they are now on blood pressure tablets. Thanks to us checking it out. It is rewarding. It is a nice service to do. And if you do health checks, it goes hand in hand with health checks. Or a nice enabler for the healthcheck. If you have had the blood pressure check you can say 'would you now like the healthcheck?' I can check everything for you. That way it is really good.' (Pharmacy 8)

'It is not that hard. You would be surprised how many people come in and just say 'can you do me that check again.' I mean I never say no, as it isn't worth it. It is well received, definitely. I think we need a different cohort of customers to make it successful. I think younger females would be a good cohort for it. Obviously the age range on the BP plus excluded them, so, yeh, I would like to do those. But to be fair I did them anyway. Anyone that said yes I would do them. It was just 75% weren't eligible.' (Pharmacy 10)

'Just think of it as something to help your learning. That's how I saw it anyway. Anything that was suggested, I always did it as a learning thing. It was helping me learn the nonpharmacological aspects of healthy living and all that sort of things, and then bringing in the pharmacological side too. So if I didn't understand something I could go and look it up. I never saw it as a bad thing.' (Pharmacy 11)

'Staff engagement is really important. But I can understand some people are fearful. To be honest, I have too much staffing! But I would rather have that and be able to offer this service and make it successful rather than not having enough and missing out on being able to do something to help the community… You can easily cover a member of staffs wage by being able to do enough checks if you have time. Make the investment.' (Pharmacy 2)

'No, I think pharmacists are in a good position to do this. There is no problem there. Probably talk to patients. If it is high, try and find out why.' (Pharmacy 3)

'I think the system is very effective in my opinion looking at patients medication, flagging them up when you are running the prescriptions. I would say that is an effective process. It has been a smooth service. It runs by itself. Each consultation takes about 15 minutes so not too long.' (Pharmacy 4)

'Take it as a service with additional value, not something that just takes up time in doing paperwork…This is the biggest thing we found for this service. It was very simple. It was on

PharmOutcomes and you did it as you went along actually. so the time value you spent on it was very good as it was almost an instant return.' (Pharmacy 7)

Interview with commissioner

In addition to interviewing pharmacies, an interview was also carried out with the current commissioner of the service, who was initially involved in the roll out to workplaces.

When talking about the rationale for the service in workplaces it was about making it quick and accessible**.**

'Try and keep it short, concise with a clear focus on CVD. And try and make it as convenient and accessible as possible. So the thinking was that by doing it within people's workplaces, obviously they wouldn't have to go after work, at weekends, or take time out of work. We would literally take it to their workplace by offering 10-15 minute checks. Hopefully the employer would be more supportive of them going on to have that check.'

It was also trying to target those who wouldn't normally put a large emphasis on their own health.

'I was aware that ideally we were trying to target the people who perhaps aren't so engaged in their health… Some locations, definitely the NHS trust locations, were a lot better from that point of view. We would get a lot more people from like routine and manual employment where some of the district and borough councils I think it was predominantly people who were probably more affluent and educated.'

Case study videos were created showing the outputs of the service.

BP+ 'Reducing risk of stroke in Surrey Heartlands' - YouTube

Surrey FA | Walking Football Blood Pressure Tests with Surrey Heartlands - YouTube

Similar to that seen in the pharmacies, those individuals having a BP+ check in their workplaces were open to having conversations about their health.

'Everyone who came for a check that I delivered I would at least kind of give him some advice, even if their blood pressure was fine. I would skill kind of ask a little bit of questioning around. OK, what is your physical activity like, tell me a little about your diet. I think most people are kind of in. I feel like if they've made the effort to come to that check then they probably are interested. If it was like a mandatory check where we were going around and literally dragging people in, then maybe they wouldn't be quite so receptive. But I think most people who came to the check were kind of interested in having a little bit of conversation around their physical activity or their alcohol consumption or whatever it might be… I think most people were relatively receptive of that information, even if they didn't know they could be doing that sort of thing'.

For future workplace based initiatives trying to identify workplaces with the target demographic would be useful.

'So yeah, I mean certainly I would like to try and identify workplaces where you know you're going to have a high proportion of routine and manual workers. That is definitely something I would like to try and do.'

For future service roll outs information governance (IG) considerations also need to be taken into account in the planning of the service, in order to enable capture of the key data outcomes.

'In terms of evaluating the project we don't actually know the outcomes, and that's a major issue and that's around IG and data... So all those people that we have identified with AF or hypertension, we don't actually know whether they've subsequently been diagnosed with AF, hypertension and gone on the QOF register, or whether they've been given antihypertensive or how they're being, or whether they've actually had any follow up at all.'

For future service roll outs spread of the pharmacies should also be considered.

So in terms of kind of actually having a reasonable spread across the whole of Surrey, I don't know how we would get around that or how we would actually do that, but it is kind of trying to get providers on board that yeah, are willing to actually, I don't know deliver at similar levels or whether you get, you commission a provider to go out and deliver it in the communities rather than go via pharmacies… Getting the activity across the patch is important because yeah, otherwise you just kind of got pockets where you delivered it.

Linking to other services would also be something to consider

'Whether it (BP+) would be almost like a screening tool for health check, so you would do like a kind of, like a short sharp check on everybody who came through the door… you say 'would you be interested in this kind of mini check' and then those people who were deemed as at risk if you like would then be offered the full health check whether it's there and then or at a later date. I think that's an interesting approach, and kind of compromising the two services, but… if you're willing to spend 10 minutes, at least we have identified whether you're likely to be at risk, and then if you can, invite you for a more comprehensive health check.'

Some of the barriers identified by the commissioner were similar to those seen by pharmacies, with the additional barrier of IG.

'Certainly a barrier would be IG. That would definitely be a barrier, and some of the staffing resource would be a barrier. Covid. In some places some of the barriers have been like location wise so when we got into workplaces actually getting space has sometimes being a barrier. Trying to find a suitable room that you can actually do it in.'

In terms of enablers, local relationships were an enabler.

'I think kind of there was an opportunity to get in the door because we were doing it on behalf of Surrey Heartlands as a system. But equally I kind of mentioned that yeah, having kind of senior stakeholders to really support it probably would have been helpful… And yes, contacts I suppose. We subsequently worked with Surrey FA which I don't think we would have done had we not been working at Surrey Heartlands level.'

In terms of the future, for future roll out different considerations should be taken into account.

'It is a good idea and I think it does have potential. It is kind of a case of OK. Well yeah, initially I think this was a pilot for us to run in 20 pharmacies and do some workplace stuff. How we scaled up or what we do next? It's kind of unfortunate timing in terms of the funding, and Covid… There's definitely potential for something that is shorter than an NHS check. Less comprehensive.'

'Ultimately, CVD kills more people in the UK than anything else, and it's like one in four people die of CVD and then you consider like the impact on people who don't die and have to live with ongoing CVD related illnesses.'

Building on the potential of prescribing this could also be considered.

'I think it's quite complicated, but if you identify someone, could you look at prescribing their meds there and then within the pharmacy or starting on that treatment then? So then you obviously minimize the work in primary care rather than point someone back there, but again, we haven't had an opportunity to explore that.'

Discussion

The blood pressure plus service, although hindered by the COVID-19 pandemic was piloted successfully in pharmacies across Surrey Heartlands. Patients were identified with both hypertension and AF, with this saving patients from future strokes, and saving future costs to the healthcare system through the earlier initiation of treatment. Pharmacies are well placed to offer blood pressure checks, as they are accessible to the public. The blood pressure plus was quick and easy to administer, and patients benefitted from knowing more about their blood pressure results but also understanding the impact of their lifestyles on their outcomes. The knowledge increase seen by patients after the intervention has been clearly seen. When looking at table 20 it is seen that all proposed outcomes were achieved for the service.

COVID-19 was the key barrier for the roll out of the pilot as checks were stopped as a result of social distancing. A small recovery to interventions occurred in 2021, but this was not back to pre-pandemic levels. GPs who were not seeing patients face-to-face during the pandemic also realised the value of pharmacies being able to complete a blood pressure check. Enablers for the service were engaged and well-trained teams.

Pharmacies were supportive and positive about the service, although some had limited follow up with patients. Pharmacies understood the importance of the service in patient care and overall prevention of disease. Training and the support available was rated well, although there is potential for more recruitment and patient education material. Expanding the service to younger patients, for example those who need blood pressure checks for contraceptives would take pressure off GPs, and also allow a more accessible service for the wider population. Linking to other services, or being a gateway to other services e.g. the NHS health check are considerations for the future.

When looking at deprivation, the postcodes in Surrey Heartlands have 5.9% of their wards classified as being in IMD decile 1-4 (none are in decile 1).[8] From the BP+ service 7.8% of those who undertook the service fell into IMD decile 1-4 so the service was able to capture and support those in less deprived areas.

Link to key outcomes of the project

When reviewing the key outcomes of the project a summary of the findings are recorded below:

Proposed outcome	Key results
To reduce the burden of ill-health and deaths caused by hypertension and AF	From the patients tested 20% were identified with hypertension. 15 patients had suspected AF identified. It is expected that 3.96 strokes were prevented. Patients were also counselled and referred to services e.g. smoking cessation that would impact on overall cardiovascular risk.
To increase the awareness amongst citizens of the link between the conditions and serious cardiac events such as stroke	Patient surveys showed an increase in understanding of conditions and risk factors. Almost all were able to identify key risk factors for cardiovascular disease after the intervention.
To increase the number of people who "know their numbers" i.e. have opportunity to check their blood pressure and pulse.	A total of 4591 checks were completed. From patient survey data all those who responded (n=53) were able to identify their blood pressure result after the intervention.
To increase citizens capacity (in terms of knowledge and skills) to manage/prevent high blood pressure through lifestyle modifications	The results show multiple referrals to services to support lifestyle changed. Almost half of those asked in the customer satisfaction survey (46%, n=46/100) planned to make a change to reduce their risk of cardiovascular disease.
To increase the number of citizens who have hypertension or AF who are actually diagnosed.	Using the service 20% of patients were diagnosed with suspected hypertension (916/4591). Less than 5% identified with an irregular pulse (15/274) were diagnosed with suspected AF.
To ensure that these aims are equitable across Surrey Heartlands in relation to CVD need in order to reduce CVD-related health inequalities	The interventions numbers by pharmacy were varied. However, 7.8% of those who undertook the service fell into IMD decile 1-4 (versus 5.9% of the local population in these groups). Therefore, those in less affluent areas were targeted successfully.

Table 20: Key outcomes of the service

Limitations

This project was a pilot, to understand the value of providing blood pressure and AF checks in a community pharmacy. Whilst the surveys and interviews gave insights into findings from patient feedback, and as stated by the commission governance was an issue. This meant no real time patient data was able to be collected, therefore although we have collected anecdotal findings, we are unable to confirm the exact number of patients who received a confirmed diagnosis or who were initiated on new medication, because of the service. In addition, we did

not capture data on any other conditions that were suspected or subsequently diagnosed in participants. The pharmacies used in the pilot were those who expressed an interest, and whilst the allocation of pharmacies was attempted to be mapped to areas of deprivation this may not have been possible. A further limitation was that Horton pharmacy completed by far the largest number of interventions, so the interventions were not evenly spread across the Surrey Heartlands area. Some pharmacies only completed a handful of checks. In addition, some of the pharmacies who took part in the service did not contribute to this evaluation. However, from the number who completed the survey and interview, the results should be generalisable.

Considerations for future blood pressure services

- Link to other services already completed in pharmacies
- Ensure, where possible, an even spread of pharmacies across a locality
- Where the service specifications are not met, have a robust process in place to understand why and support the pharmacy
- Provide ongoing training on the service to cover turnover of colleagues
- Ensure sufficient resources and patient information leaflets are provided to the pharmacies
- Expand to include other patient groups
- Ensure communication of the service to local GPs
- Ensure a referral pathway to GP's which includes a post event message to understand the outcome from the referral
- Review how the service is marketed to the wider community not just those who visit the pharmacy
- Consider the aims of the pilot to ensure data collection and service processes will be able to answer the aims effectively
- Consider the evaluation outputs wanted at the start of the programme to ensure data is collected that will enable robust findings
- When considering the evaluation outputs consider GDPR issues initially and try and ensure there is more seamless access to data
- Consider follow up with patients and GPs to gather actual outputs from the service

Conclusion

The blood pressure plus service was well received by pharmacies and patients alike. Whilst the COVID-19 pandemic did not allow the full impact of the service to the shown, strokes and monetary savings for the sector have been achieved. All proposed outcomes were met for the programme. Pharmacies are well placed to offer services to patients, and continue to be a key part of the multidisciplinary healthcare team. Pharmacies are willing and able to provide services. Early buy in of other local services and providers, explaining key benefits and features of the blood pressure plus service is advised. Pharmacies are willing and able to participate in services, where training and resources are provided. Future pilots or services should ensure the metrics measured clearly correlate with the aims of the service, with follow up of patients, where possible, to ensure the full patient journey is captured.

References

1. Public Health England. The 10 year CVD ambitions for England one year on. 2020. Accessed 11th January 2020. Available at: https://publichealthmatters.blog.gov.uk/2020/02/06/the-10-year-cvd-ambitions-for-england-one-year-on/
2. NHS England. General Practice Forward View. April 2016. Accessed 11th January 2020. Available at: https://www.england.nhs.uk/wp-content/uploads/2016/04/gpfv.pdf
3. Public Health England. Health matters: combatting high blood pressure. January 2017. Accessed 11th January 2020. Available at: https://www.gov.uk/government/publications/health-matters-combating-high-blood-pressure/health-matters-combating-high-blood-pressure#call-to-action
4. Surrey County Council. Pharmaceutical Needs Assessment. 2018. Accessed 11th January 2020. Available at: https://mycouncil.surreycc.gov.uk/documents/s43933/2018%20PNA%20FINAL.pdf
5. Twigg, M.J., Thornley, T. & Scobie, N. Identification of patients with atrial fibrillation in UK community pharmacy: an evaluation of a new service. *Int J Clin Pharm* **38,** 784–787 (2016). https://doi.org/10.1007/s11096-016-0303-8
6. Public Health England. The 10-year CVD ambitions for England – one year on. Accessed 19th April 2021. Available at: https://publichealthmatters.blog.gov.uk/2020/02/06/the-10-year-cvd-ambitions-for-england-one-year-on/
7. Surrey Heartlands. About us. Accessed 16th June 2021. Available at: https://www.surreyheartlands.uk/about-surrey-heartlands/
8. Surrey-i. Index of Multiple Deprivation 2019. Accessed 20th April 2021. Available at: https://www.surreyi.gov.uk/dataset/v81k7/index-of-multiple-deprivation-2019

Appendices

Appendix 1: Service specification

Public Health Agreement
For

Surrey Heartlands Community Pharmacy BP Plus Programme

Commissioner: Surrey County Council Public Health team on behalf of Surrey Heartlands Planned Care Programme Board (CVD group)

Provider: Participating Community Pharmacies

BETWEEN Surrey County Council **AND** the Pharmacy

1. Scope of the Service

The Service aims to increase the number of opportunities for Surrey Heartlands citizens to have their Blood Pressure and Pulse Rhythm checked in Community settings. It has two main elements:

1. Checks for certain Stroke and CVD risk factors (raised Blood Pressure and Pulse Rhythm) and appropriate onward referral delivered by community pharmacies (named the 'Blood Pressure (BP) Plus' check)
2. Community Pharmacies offering BP Plus to manage patients referred or signposted from any community and voluntary organisations.

This service specification is concerned with the first element only (that is delivered by community pharmacy) but it is important that this service is not considered in isolation from the Surrey Heartlands CVD Prevention programme. There will be a range of activities, from raising awareness amongst citizens of the risks associated with high blood pressure or AF through to systematic case finding and review in primary care. All aspects are key to improving the detection and management of these conditions with the aim of reducing the number of strokes and incidents of CVD in Surrey Heartlands.

Refer to Appendix: 1 to highlight the population need, causes of CVD and the opportunity for Improvement.

2. Outcome of the Service

Surrey Heartlands is committed to the prevention of stroke and CVD through improved detection and management of Hypertension and AF. The overall CVD Prevention programme is seen as a cornerstone of that ambition. Its overall objectives are:

1) To reduce the burden of ill-health and deaths caused by hypertension and AF (i.e. reduce stroke and CHD events and deaths).

2) To increase the awareness amongst citizens of the link between the conditions and serious cardiac events such as stroke.

3) To increase the number of people who "know their numbers" i.e. have opportunity to check their blood pressure and pulse.

4) To increase citizens capacity (in terms of knowledge and skills) to manage/prevent high blood pressure through lifestyle modifications.

5) To increase the number of diagnosed citizens who have hypertension or AF.

6) To ensure that these aims are equitable across Surrey Heartlands in relation to CVD need in order to reduce CVD-related health inequalities (i.e. the interventions are targeted)

The BP+ service is seen as key to helping to achieve (but not be held wholly accountable for) these outcomes.

3. Service Description

The BP+ check will include blood pressure measurements and a pulse rhythm check. These checks will be carried out according to the relevant clinical guidelines/protocols. The healthcare professional delivering the check should also have the necessary skills to support customer's queries around healthy lifestyle and signpost on to relevant services (i.e. Make Every Contact Count skill should be deployed). **It is expected that participating pharmacies will already be accredited to Level 1 Healthy Living Pharmacy.**

The BP+ check patient pathway is shown in Appendix: 2

There are range of scenarios where the participating Community Pharmacies can offer the BP+ service and below are some examples:

- The patient has come to collect prescription medicines which present an opportunity for brief advice and offer of the check.
- The patient has sought advice from the Pharmacist about stroke or CVD risk.
- Identified during Medicine Use Reviews or any other patient consultations.
- Promotional information displayed that prompts the customer to have a BP+ check.
- The customer has been advised to have their blood pressure checked as a result of earlier blood pressure test.

The above list is not exhaustive and participating pharmacies are responsible for recruitment of patients for the service.

Onward referral/signposting protocols

Participating Community Pharmacies offering BP+ will be testing Blood Pressure and Pulse Rhythm as a core component under this service. Depending on the results of the BP+, the healthcare professional/pharmacist will advise the appropriate action(s) from the following options:

- Referral/signposting or advice about healthy life style management
- Depending on the results, encourage the patient to home monitor BP results for a month and bring it back to discuss with the Pharmacist.
- Referred for a full NHS Health Check

If the participating Pharmacy does not provide NHS Healthcheck, it should refer patients to the closest NHS Health Check providing pharmacy. The list of the current provider can be found on https://www.healthysurrey.org.uk/your-health/health-checks.

Results communication, brief advice and data transfer

The pharmacy professional will verbally explain the results of the check and the customer will receive a simple handout of their results. This information may also be accompanied by very brief verbal advice about healthy life style management around smoking ,alcohol, healthy weight (including relevant dietary advice such as salt intake) and physical activity.

Any onward referrals required will also be explained.

4. Eligibility Criteria

The service will screen any Surrey Heartlands **residents aged 35 years and over** that have not already been diagnosed or receiving treatment for Hypertension, Atrial Fibrillation or any other CVD disease.

Inclusion criteria:

- Any one who is aged 35 years and over
- Without known cardiovascular disease including: High blood pressure (or are on treatment for high blood pressure), Atrial Fibrillation, Diabetes, Chronic Kidney Disease, Angina, Stroke, Transient ischaemic attack, Heart failure and Myocardial infarction.

Exclusion Criteria

- Anyone under the age of 35 years of age
- Has diagnosed CVD diseased
- Is on any Cholesterol reducing medicine
- Pregnant women

5. Service Delivery

The service may be delivered by an appropriate trained pharmacist or an appropriately trained pharmacy staff member who has declared the competency mentioned in **Appendix : 3** and whom the responsible pharmacist deems competent to deliver the service.

Atrial Fibrillation:

Atrial fibrillation is an arrhythmia (abnormal heart rhythm) that results from irregular, disorganized electrical activity in the atria, leading to an irregular ventricular rhythm. AF can make an individual feel, dizzy or short of breath, but there can also be no symptoms. The most common causes of AF are ischaemic heart disease, hypertension, valvular heart disease, and hyperthyroidism. Since the heart does not fully contract during AF blood can pool and clot within the heart. If a blood clot leaves the heart and blocks an artery in the brain it may cause a stroke.

Measuring of Atrial Fibrillation:

A manual pulse check will be completed to screen patients for irregular pulse rhythm. If the manual pulse check indicates any abnormal rhythm, then AliveCor will be used to determine the presence of Atrial Fibrillation. **How to measure manual pulse check can be found in Appendix 4.**

- If the AliveCor result is negative; no further action is required relating to AF.
- If the AliveCor result is positive or unclassified; the pharmacist should advise the individual to book a GP appointment within 72 hours.

The AliveCor will be provided to the participating pharmacy by Surrey Heartlands ICS on loan basis. It is the responsibility of the participating pharmacy to ensure suitable security and storage arrangement for the device to ensure that it is not damaged or lost. AliveCor works with most common smartphones and tablets, Apple and Android. It does not require Wi-Fi or Bluetooth (except initial download of the app or to email traces). It is the pharmacies responsibility to ensure that Alive Cor is used in conjunction with pharmacy approved device and not on any personal device and used in line with Organisations IT Security Policy. Please find the Manual and Protocols for use of Alive Cor in **Appendix: 5**

Blood Pressure

Hypertension (high blood pressure) is a systolic blood pressure above 140mmHg, or a diastolic blood pressure above 90mmHg.
High blood pressure rarely makes people feel ill and there are usually no symptoms. It greatly increases the risk of cardiovascular disease, heart attack, stroke and heart failure, and unfortunately often goes undetected until an acute event occurs, so early detection is key.

Measuring of Blood Pressure:

It is essential that the blood pressure measurement taken is accurate so that the measured blood pressure is quality-assured and can be relied on by the person being tested and their GP. Ensure the individual has had at least 5 minutes to sit and relax before commencing testing (can include calm waiting time as well as the introduction discussion) before carrying out the blood pressure test.

All individuals who attends a BP+ session will receive a blood pressure test to identify those with hypertension. The following will be a method of testing:

- Patient will be asked to sit 5 minutes prior to testing
- 3 readings are to be taken, with 1 minute between each reading
- The lowest reading is to be recorded as the 'recorded' blood pressure
- **Automated upper arm blood pressure monitors** will be used to measure the blood pressure, with correct cuffs size used as per patient need.

It is Pharmacy's responsibility to use a clinically validated Upper Arm Blood Pressure Monitor and to ensure that it maintained and accurately calibrated in accordance to the manufacture's guidelines.

After the blood pressure has been tested in community pharmacy, the following pathway will be adhered to:

- If the Recorded Blood Pressure is less than 140/90 mmHg, then no further action required relating to BP and proceed to the Pulse Check.
- If the Recorded Blood Pressure is between 140/90 mmHg and 150/100 mmHg, the pharmacist should encourage the individual to purchase a home BP monitor and record the readings for a month. The patient can bring back the reading to the pharmacy to discuss it further.
- If the Recorded Blood Pressure is greater than 150/100 mmHg, the pharmacist should advise the individual to book a GP appointment with in the next 7 days.
- If the Recorded Blood Pressure is greater than 180/110 mmHg, the pharmacist should advise the individual to book a GP appointment within 72 hours.

Training:

Face to face training will be available to all participating pharmacies as a part of this service. Declaration of Competence will need to be completed on Pharma Outcomes after successful completion of the training.

If you require more members of staff trained on the service, please contact Jason Ralphs (Jason.ralphs@nhs.net).

6. Quality Assurance

Clinical Guidelines

All Participating pharmacies are required to follow the NICE Clinical guidelines (CG127) Hypertension in Adults: diagnosis and management when delivering the BP+ service**.** NICE Guidance: Hypertension in Adults- Diagnosis and Management https://www.nice.org.uk/guidance/CG127/chapter/1-Guidance#diagnosing-hypertension-2

Data collection requirements

Data collected as part of the BP + check will be entered by the participating pharmacies on to Pharmoutcomes ideally on the same day. This will then enable safe transfer of data to the patients registered GP practice.

Equipment

Quality Assurance/ calibration of the Blood Pressure monitor should be performed as per manufactures guidance. For reference MHRA guideline for Blood Pressure Management devices can be found on MHRA Blood Pressure Management devices.

Declaration of Competency:

Any pharmacist or pharmacy staff member providing the service should have receive face to face training from Surrey Heartlands ICS team and declare their Competence on Pharmoutcomes as per Appendix : 3.

7.Monitoring Arrangements

BP+ service will be monitored by Surrey County Council through the Pharmoutcomes system. Regular monitoring reports will then be made available at regular intervals to the Surrey Heartlands Planned Care Programme Board (CVD group).

As part of signing up to this service specification, community pharmacies accept that they will be part of an evaluation of the initial service period (conducted at Year 1 and Year 2). The evaluation will take in wider elements of effectiveness that community pharmacies would not be held wholly responsible for (e.g. how many people go on to be diagnosed with hypertension in primary care). However, there are certain activities that will need to be monitored and compared to expected levels.

As a part of the service the participating Community pharmacies **is expected to do a minimum of 50 BP + checks per quarter.** There is no cap to the maximum number of BP+ check a pharmacy can provide.

All the information from the service should be transferred via Pharm Outcomes to the patients registered GP (except where consent not given).

8.Remuneration for the service

For every BP+ delivered the community pharmacy will be paid **£12 per patient**. This service will be delivered as a part of Public Health agreement with Surrey County Council. Pharmacies will record activity via Pharmoutcomes template and payment will be made as per current Public Health payment terms and cycle of pharmacy payments for commissioned services.

Appendix: 1 Population Needs

National and Local Context: System Priorities and Strategic alignment

Using the NHS Right Care approach, Cardiovascular Disease (CVD) has been highlighted as an area with opportunities to improve quality and outcomes across the Surrey Heartlands Integrated Care Partnership (ICS).

In September 2017 a multi-stakeholder event was held to review the opportunities relating to cardiovascular disease across the whole system. One of the main discussions was around prevention and four priorities were identified:

1. Community awareness raising and testing opportunities
2. Improved case finding and management in primary care
3. Support for healthcare professionals and patients around lifestyle modification
4. Support for patients to manage their condition

Stroke reduction has been specified as a system wide priority.

As well as contributing to the first priority above, this service will be aligned with related programmes such as the NHS Health Check program and the Healthier You diabetes prevention programme. It would also strengthen prevention and early detection of long-term conditions whilst encouraging buy-in for personal responsibility for health and self-care.

The General Practice 5 year forward view stated an ambition to transform how pharmacists, their teams and community pharmacy work as part of wider NHS services in their area. This service represents an opportunity to build further relationships with this sector and learn more about professional and system integration, particularly between primary care and community pharmacy.

In the 2017 guidance Health matters: combating high blood pressure, Public Health England recommend the use of community pharmacy for helping to detecting CVD risk factors:

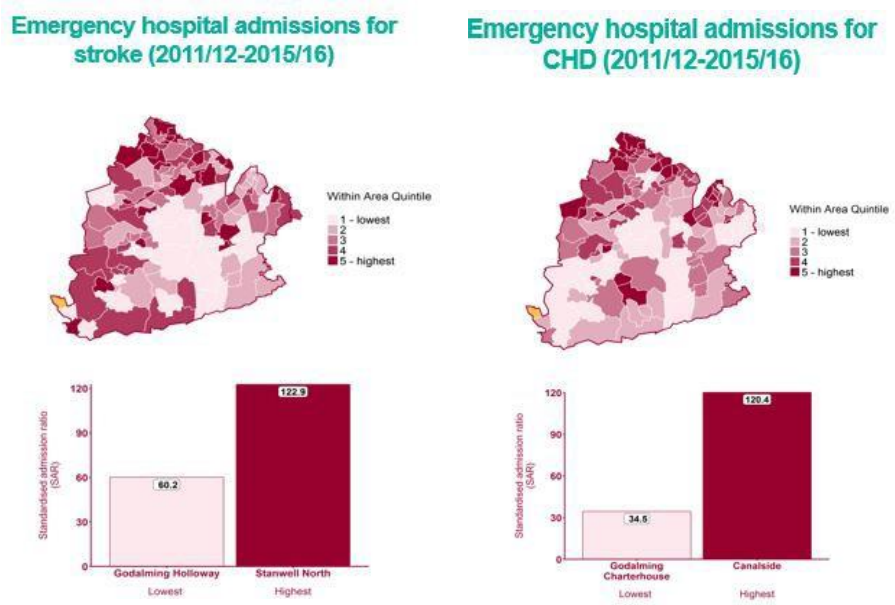
"With 1.2 million people visiting a community pharmacy every day, pharmacy teams have an enormous opportunity to promote health at a local level. For some people, the local pharmacy will be their first point of contact, or their only contact, with a health care professional. Healthy living pharmacy teams can increase opportunistic testing in pharmacies and the prevention, early detection and management of high blood pressure."

Population needs assessment: The impact of CVD

CVD remains a leading cause of morbidity and mortality and a significant burden to health services, social care and the economy at large.

In the South East, heart disease and cerebrovascular disease combined account for the largest proportion of life years lost (both in terms of premature death and effect on quality of life through disability)[1] .

In Surrey, CVD is the leading cause of the gap in life expectancy between the most and least socio-economically deprived areas. The impact of these social inequalities on CVD related hospital admissions is shown in the maps below - the difference between small areas within Heartlands is stroke.



The causes of CVD

- Hypertension (HTN) is the main cause of 45% of all coronary heart disease, 50% of strokes, 25% of chronic kidney disease and 8% of all dementia.

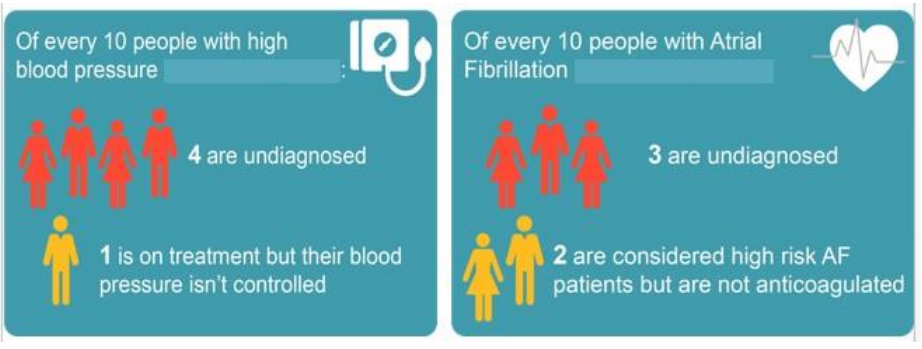
- Atrial Fibrillation (AF) is the most powerful single risk factor for suffering a deadly or debilitating stroke.

CVD is of course strongly related to lifestyle factors such as smoking, weight and inactivity. Please note that the **primary prevention** of these conditions and subsequent CVD is an important part of the Surrey Heartlands Prevention mandate (through action on improving health-related lifestyles and the wider determinants of health). The Heartlands CVD Prevention Core group has a focus on **secondary prevention** (improved detection and management of CVD risk conditions such as HTN and AF).

The opportunity for improvement

Only around 6 out of every 10 people who have hypertension in Heartlands have been diagnosed, leaving more the **80 thousand** people potentially unaware they have a condition that significantly raises their chances of a heart attack or stroke. At GP practice level, diagnosis rates can fall to as low as 46% for some practices.

Atrial Fibrillation is also under-diagnosed across the Heartlands, with around one third of people suffering from the condition unaware and undiagnosed.



According to NHS Rightcare if CCGs within the Heartlands achieved the average diagnosis rates of the best performing 5 of their most similar areas, an extra **10 thousand people** could be diagnosed with hypertension and **one thousand** with AF.

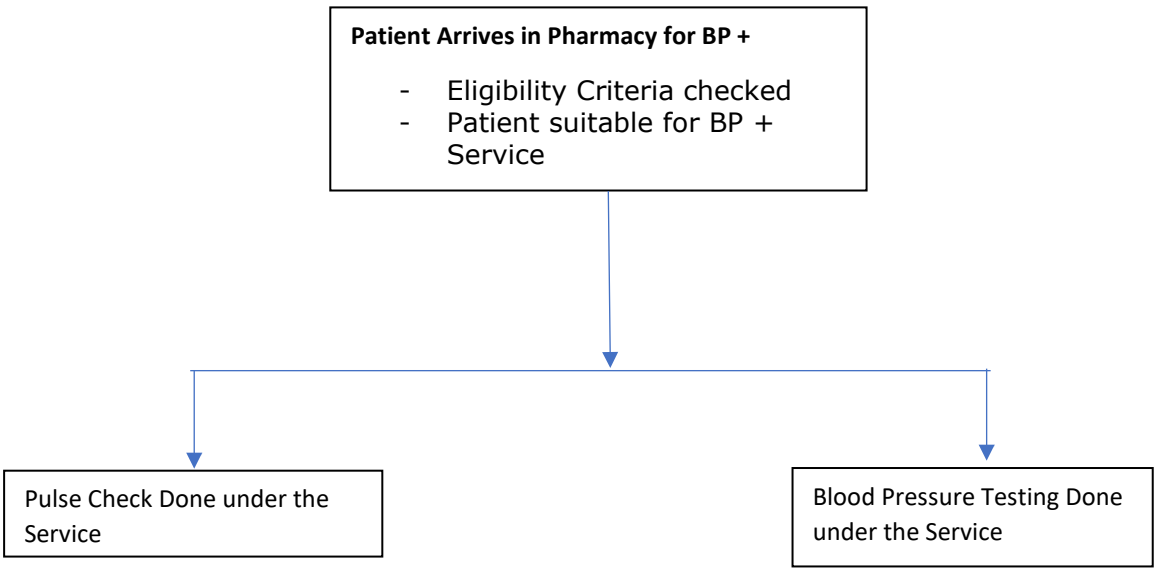
The potential health and financial benefits of increasing detection and improving management of hypertension and AF are well documented. The "Size of the Prize" data released by NHS England represented the huge potential of optimal treatment of these conditions within Surrey Heartlands.

3. The opportunity: potential events averted and savings over 3 years by optimising treatment in AF and hypertension, 2015/16

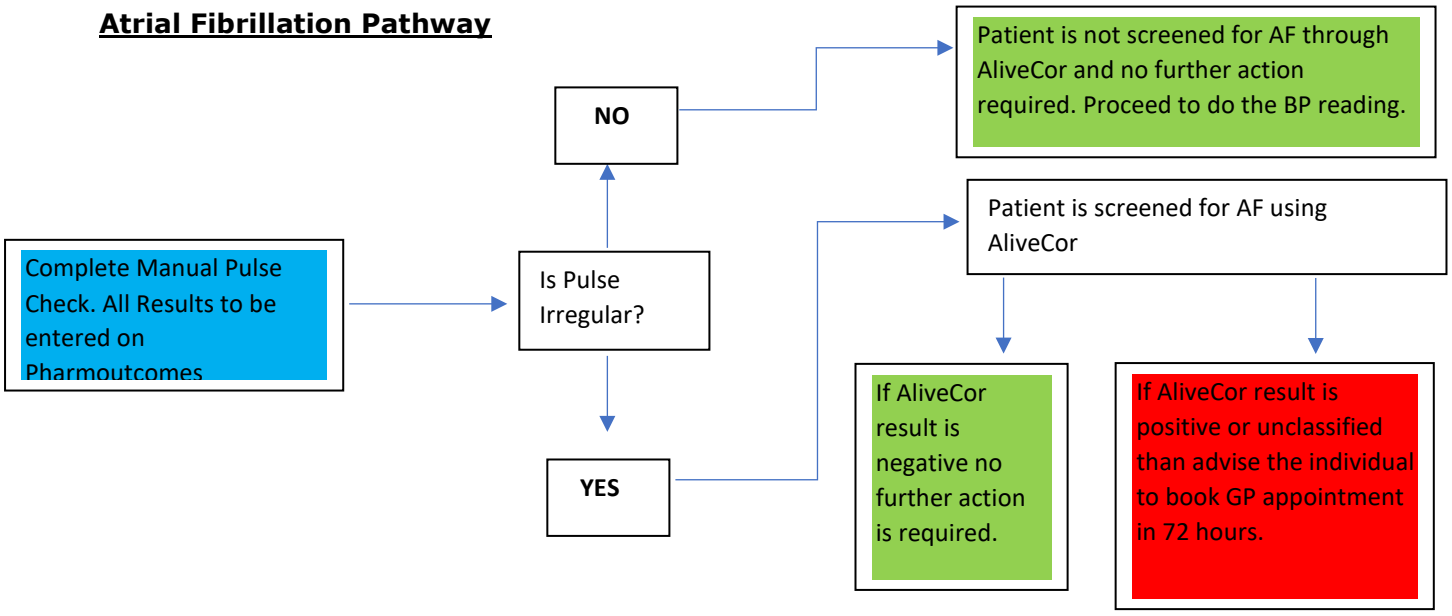
Optimal anti-hypertensive treatment of diagnosed hypertensives averts within 3 years:	160 heart attacks	Up to £1.10 million saved[2]
	230 strokes	Up to £3.40 million saved[1]
Optimally treating high risk AF patients averts within 3 years:	220 strokes	Up to £3.60 million saved[1]

Appendix: 2

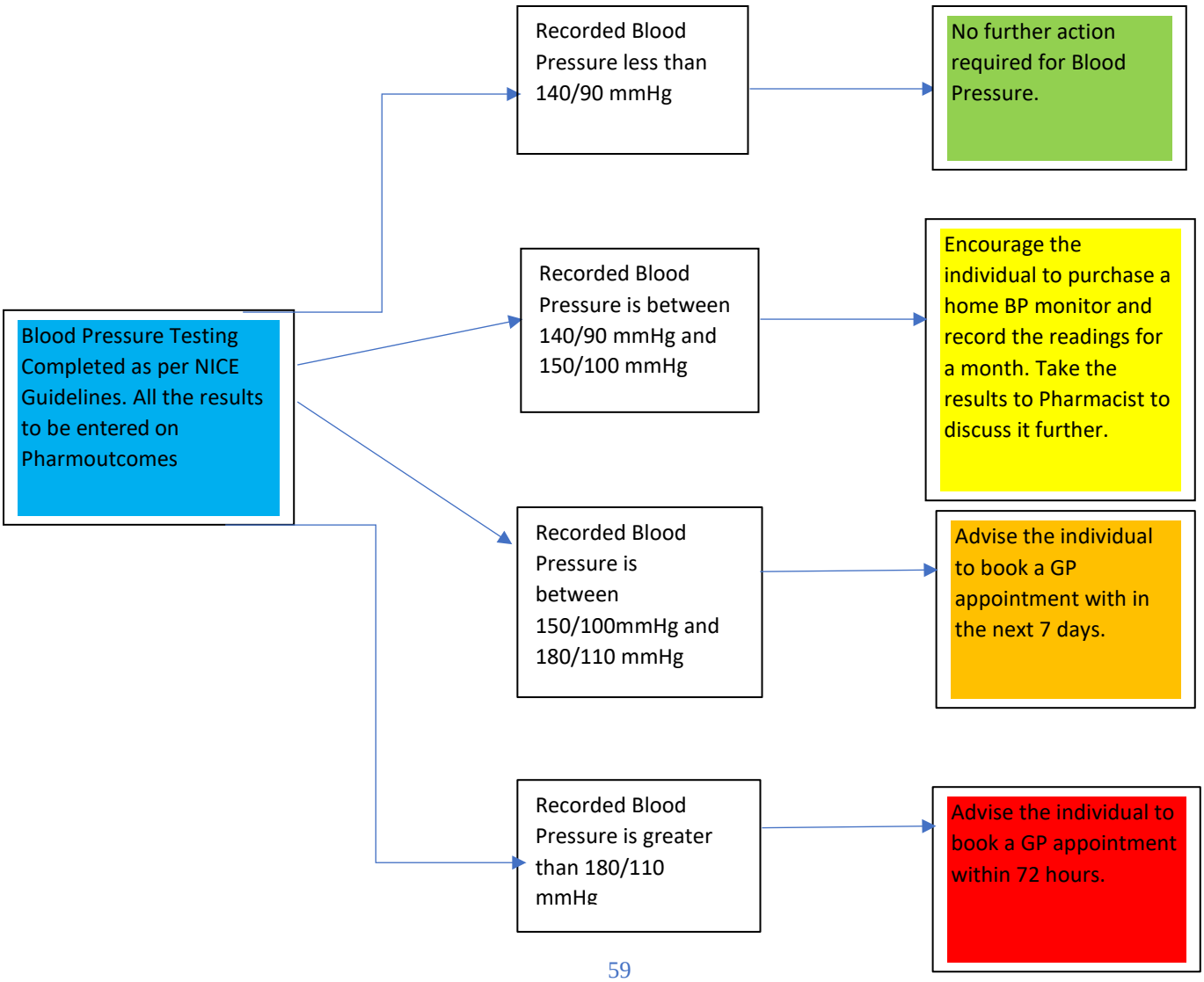
BP+ check patient pathway



Atrial Fibrillation Pathway



Blood Pressure Pathway



Appendix : 3 Training Requirements

Measuring Atrial Fibrillation using AliveCor:

Atrial Fibrillation		
Activity	**Resources**	**Date signed off**
Manual Pulse check	KYP - Pulse Sheet.pdf	
Setting up of Alive Cor	Explained and done during site visit AHSN version How to set up Kardia Mo The following actions should be completed: • Download the Kardia App • Register the AliveCor with KSS AHSN • Download NHS Mail App	
Using Alive Cor	Can the individual measure AF by using Alive Cor device? 1 Lead ECG Device Project set-up guida	

AliveCor Training Checklist

Training Requirement	Date Completed
Ensure patient has read the Privacy Notice Privacy Notice.pdf	
Ensure Contra-indications are reviewed	
Ensure fingers are clean and dry	
Ensure AliveCor is placed on a stable surface and close to the tablet/phone	
Ensure noise is kept to a minimum during the 30 second reading	
Understand the actions that should be taken once the AliveCor reading is complete and the result is displayed	
Ensure no personal information is recorded within the Kardia/AliveCor App	
Ensure the ECG is recorded as a guest	
Understand how to send the ECG via email	
Understand that the ECG is not saved and must be emailed at the time of reading to ensure the record can be saved	
Agree a folder and naming convention for the ECG's on the Pharmacy computer/drive	
Understand how the ECG will be attached to Pharmoutcomes	
Understand what advice/guidance will be given to the patient	

Measuring Blood Pressure

Key steps:

- Ensure client has had 5 minutes to relax before commencing testing.
- Measure the blood pressure in both arms and take a total of three readings.
- Use the arm with the highest reading if further BP measurements are needed.
- Complete the recorded measurements on Pharmoutcomes,
    - Advice given to patient and appropriate referral made according to the guidelines. Ensure patient has had 5 minutes to relax before commencing testing (can include calm waiting time as well as the introduction discussion) before carrying out the blood pressure test.

The patient should:

When measuring blood pressure in the clinic or in the home, standardise the environment and provide a relaxed, temperate setting, with the person quiet and seated, and their arm outstretched and supported

Cuff size:

Ensure the correct cuff size is used (this is determined by the arm circumference). The bladder inside the cuff should encircle 80% of the top of the arm. If the cuff is too big the reading will be falsely low, if it is too small the reading will be falsely high. Please ensure a correct cuff size is used.

The technique:

- Ensure your hands are clean.
- Ask the person being tested if they would prefer either of their arms not to be used – for example because of previous trauma or surgery
- The cuff should be placed two to three centimetres above the elbow joint. The whole cuff should be placed directly next to the skin and clothing above the cuff should be loose – remove arm from sleeve if necessary
- The centre of the bladder in the cuff should be positioned over the line of the artery. The cuffs have this marked on them
- The arm should be supported at the level of the mid sternum (heart level). If the arm is below heart level it can lead to an overestimation of the
- systolic and diastolic pressure by about 10 mmHg. Having the arm above heart level can lead to underestimation.

Blood Pressure		
Activity	**Resources**	**Date signed off**
Nice Guidelines : Hypertension in Adults – Diagnosis and Management	https://www.nice.org.uk/guidance/CG127/chapter/1-Guidance#diagnosing-hypertension-2	
MHRA Guideline for Blood Pressure Management devices	• Manufactures Guidance on use of Upper Arm Automated Blood Pressure monitor • MHRA Blood Pressure Management devices	
Completed the Blood Pressure Training Assessment	Blood_Pressure_Training_Assessment_W	

Appendix : 4 How to measure Manual Pulse Check

1. To assess your resting Pulse rate in your wrist , sit down for 5 minutes beforehand. Remember that any stimulants taken before reading will affect the rate (such as caffeine or nicotine). You will need a watch or clock with a second hand.
2. Take off you watch and hold your left or right hand with your palm facing up and your elbow slightly bent.
3. With your other hand, place your index and middle fingers on your wrist, at the base of your thumb. Your fingers should sit between the bone on the edge of your wrist and the stringy tendon attached to your thumb (as shown in the image). You may need to move your fingers around a little to find the pulse. Keep firm pressure on your wrist with your fingers in order to feel your pulse.

4. Count for 30 seconds and multiply by 2 to get your heart rate in beats per minute. If your heart rhythm is irregular, you should count for 1 minute and do not multiply.

Appendix: 5

User Manual and Protocols for use of Alive Cor

Should an Alive Cor device develop a fault it is the responsibility of the recipient to contact the manufacturer directly, however the suppling AHSN may assist if required.

	User Manual	**Further technical support**
Kardia ECG	https://www.alivecor.com/user-manuals/kardia-mobile-en.pdf FAQ: https://www.alivecor.com/faq/	https://www.alivecor.com/ Tel: 0333 3010433 Email:uksupport@alivecor.com

Protocols for use of Alive Cor Devices:

When to use the AliveCor device

The chosen staff member assigned to the device will only use it if they either have their smart phone or the pharmacy tablet with the appropriate app at hand during their appointments.

The member of staff should aim to use device as often as possible to increase the detection of atrial fibrillation. **Patients with known atrial fibrillation should be excluded from using the AliveCor device.**

Patients must provide informed consent to use the device and this should be documented clearly on Pharmoutcomes. Privacy notice should be made available for patient information before asking for consent.

Clean the device with alcohol spray / wipe between every patient.

How to use the AliveCor device

1. Open the Kardia app on the smart phone or tablet device and tap record now
2. Place the device near the microphone on the phone or tablet
3. Lightly put the first two fingers on the pad of the device, one for each hand
4. A result will be generated after 30 seconds.
5. Once trace is complete a pop-up message will appear to confirm whether the trace was your own EKG. **CLICK NO TO REGISTER THE TRACE AS A GUEST EKG**.
6. Do not exit the app until you have emailed the results from your secure nhs.net email to nhs.net

Result showing normal ECG

1. Inform the patient that the result was normal.
2. Email the ECG which appears as an attachment to your Nhs.net registered address for your device remembering to include the patients name and date of birth.
3. The results will then be attached to Pharmoutcomes template for the patient.

Result showing possible atrial fibrillation

1. Inform the patient that the result showed they need further investigation and do book a GP appointment in next 72 hours.
2. Email the ECG which appears as an attachment to your Nhs.net registered address for your device remembering to include the patients name and date of birth.

Result showing Unclassified / Unreadable

1. Repeat trace once. Ensuring the following:
2. Limit background noise.
3. Apply gentle pressure to AliveCor, do not squeeze.
4. If heart rate (HR) is >100 or <50, traces will be unclassified so allow time for HR to stabilise.
5. Use an alcohol spray/wipe on the device and ensure there is enough moisture on fingers.

If 2nd trace is unclassified or unreadable

Inform the patient that the result showed they need further investigation and do book a GP appointment in next 72 hours. Email the ECG which appears as an attachment to your Nhs.net registered address for your device remembering to include the patients name and date of birth.

***Remember to Log out of the Kardia app at the end of each session to ensure that the last trace taken is not stored locally.**

Appendix 2: Patient survey

BP+: Pre Assessment Questionnaire

Prior to completing BP+ we would be grateful if you could complete this short questionnaire to provide us with some information about your knowledge of blood pressure and AF.

1. I know what my blood pressure is?

   Yes No

2. High blood pressure has symptoms?

   True False Not Sure

3. Which of the following increases the risk of getting high blood pressure?

Smoking
Inactivity
Eating foods with high salt content
Family History
High alcohol consumption
Obesity

4. What is considered to be high blood pressure?

   …….

5. High blood pressure is preventable?

   True False
   Not Sure

6. I know where I can have my blood pressure checked?

   Yes No
   Not Sure

7. How would you rate your knowledge and awareness about blood pressure and its associated risk factors?

   No knowledge 0 1 2 3 4 5 6 7 8 9 10 Excellent Knowledge

8. Have you heard of AF (atrial fibrillation) before?

   Yes No Not Sure

9. How would you rate your knowledge and awareness about atrial fibrillation?

   No knowledge 0 1 2 3 4 5 6 7 8 9 10 Excellent Knowledge

BP+: Post Session Review

Having attended a BP+ session, we would be grateful if you could complete this short questionnaire:

1. I know what my blood pressure is?

   Yes No

2. High blood pressure has symptoms?

   True False Not Sure

3. Which of the following increases the risk of getting high blood pressure?

Smoking
Inactivity
Eating foods with high salt content
Family History
High alcohol consumption
Obesity

4. What is considered to be high blood pressure?

   …….

5. High blood pressure is preventable?

   True False
   Not Sure

6. I know where I can have my blood pressure checked?

   Yes No
   Not Sure

7. How would you rate your knowledge and awareness about blood pressure and its associated risk factors?

   No knowledge 0 1 2 3 4 5 6 7 8 9 10 Excellent Knowledge

8. Have you heard of AF (atrial fibrillation) before?

   Yes No Not Sure

9. How would you rate your knowledge and awareness about atrial fibrillation?

   No knowledge 0 1 2 3 4 5 6 7 8 9 10 Excellent Knowledge

Appendix 3: Customer Satisfaction survey

BP+ Post Session Survey

1. During your BP+ session were you advised to see your GP for follow up?
    a. Yes
    b. No

2. If you were advised to see your GP for a 12 lead ECG following the BP+ session can you tell us the time frame between your BP+ session and your 12 lead ECG?
    a. Not advised to see GP for 12 lead ECG
    b. Still waiting to see my GP for 12 lead ECG
    c. Dont know

3. Following the BP+ session have you been prescribed or had a change to anticoagulant medication?
    a. Started anticoagulant medication
    b. Changed anticoagulant medication
    c. No change/not taking medication
    d. Dont know

4. Following the BP+ session have you been prescribed or had a change to blood pressure medication?
    a. Started blood pressure medication
    b. Changed blood pressure medication
    c. No change/not taking medication
    d. Dont know

5. To what extent did the BP+ session improve your understanding of Cardiovascular Disease (CVD)?
    a. Sliding scale from 0-100 (0= no change, 100 = significant increase in knowledge)

6. Did the BP+ session help you understand the changes you could make to reduce your risk of heart attack or stroke?
    a. Yes: And I plan to make a change
    b. Yes: I'm not ready to change yet
    c. No: I don't know what changes I could make
    d. No: I already know what I should do
    e. Don't Know

7. How likely are you to recommend BP+ to friends & family?
    a. Sliding scale from 0-100 (0= Not likely, 100 = extremely likely)

8. Where did your BP+ session take place?
    a. Pharmacy
    b. Workplace

9. Can you provide the name of the location where you BP+ session took place?
    a. Free text box

10. Do you have any suggestions how BP+ could be improved or any other comments you wish to leave?
    a. Free text box

Appendix 4: Evaluation questionnaire for pharmacies at the end of the pilot

Blood pressure plus service evaluation

1. Name of pharmacy_____

Part 1: Experience of service provision

2. Why did your pharmacy sign up for the service? (freetext)

3. How did your pharmacy promote the service to patients? (Tick all that apply)

- Advert in the pharmacy ☐
- Leaflet ☐
- Social media ☐
- Website ☐
- Recruitment from a prescription ☐
- Conversation when a patient was buying an OTC product ☐
- Other (please specify) ☐

4. Rank the following where 1 is not at all useful and 10 is extremely useful

	1	2	3	4	5	6	7	8	9	10
Training received										
Resources received										
Promotion material received										
Support available from the commissioners throughout the running of the service										

5. How many staff of each role were trained in your pharmacy to deliver the service?

	How many?
Pharmacist	
Pharmacy technician	
Dispenser	
Health champion	
Other (please specify)	

6. How long, on average, did it take to deliver each intervention? (Tick 1)

0-5 minutes ☐

6-10 minutes ☐

11-15 minutes ☐

16-20 minutes ☐

21-30 minutes ☐

31-45 minutes ☐

46-60 minutes ☐

Over an hour ☐

7. During the blood pressure plus service please identify any other service(s) that patients were referred to as a result of the intervention

	Always	Sometimes	Rarely	Never
Stop smoking				
Weight management				
Flu vaccination				
Other vaccination				
NHS health check				
Alcohol support				
Lifestyle intervention				
Medication review (including MUR)				
Other (please specify)				

8. Which of the following did patients agree to do as a result of lifestyle recommendations and how often did they agree to this?

	Always	Sometimes	Rarely	Never
Stop smoking				
Lose weight				
Reduce alcohol consumption				
Get a flu vaccination				
Get a vaccination (e.g. pneumococcal)				
Increase exercise				
Change diet				
Other (please specify)				

9. Regarding the service (1-10 where 1 is not at all and 10 is very) rate the following

	1	2	3	4	5	6	7	8	9	10
We had the required knowledge for running the service										
We were confident to run the service										
The equipment was easy to use										
The paperwork associated with the service was easy to complete										

Part 2: Outcomes of the service

10. How did you share outcomes with GP? (Tick all that apply)

    Letter ☐

    Email ☐

    Pharmaoutcomes ☐

    No communication ☐

    Please add any comments to explain your answer

    _____

11. If applicable, from patient feedback, how long did it take for them to get an appointment with the GP after identification of suspected hypertension?

    A day ☐

    2-3 days ☐

    Up to a week ☐

    Over a week ☐

    Please add any comments to explain your answer

    _____

12. If applicable, from patient feedback, how long did it take for them to get an appointment with the GP after identification of suspected atrial fibrillation?

    A day ☐

    2-3 days ☐

    Up to a week ☐

    Over a week ☐

    Please add any comments to explain your answer

    _____

13. Are you aware of medication being initiated as a result of the diagnosis?

Yes (please state which medicine(s) you are aware of) ☐

No ☐

14. Were any other conditions identified as part of the service that were not hypertension or atrial fibrillation? If yes, please state what

_____

15. Please rank the following regarding the service, where 1 is low and 10 is high

	1		2	3	4	5	6	7	8	9	10
Engagement of patients											
Benefit to patients											
Engagement of team											
Engagement of local GPs											
Value for money as a pharmacy service											

Part 3: Learnings and recommendations from the service

16. What were the enablers that allowed you to provide the service effectively to patients? (Tick all that apply)

Engaged team ☐

Multiple trained staff ☐

Payment for the service ☐

Receptive patients ☐

Clear SOP in place for identification of eligible patients ☐

Location of pharmacy in area with high demographic of eligible patients ☐

Support of local GP ☐

Written material about the service in the pharmacy ☐

Promotion of the service externally ☐

Other (please specify) _____

17. What were the barriers that prevented you from being able to deliver the service effectively? (Tick all that apply)

- Insufficient training ☐
- Insufficient equipment ☐
- Staff shortages ☐
- Limited patients who fit the criteria for the service ☐
- Pressure in the pharmacy to deliver other services ☐
- COVID-19 ☐
- Insufficient payment ☐
- Time to deliver the service ☐
- Time to follow up with the patient ☐
- Other (please specify) _____

18. Please list any other resources that you used to deliver the service that were not accounted for in the service specification.

_____

19. Outline any recommendations you have for future roll outs, in the following areas:

    a) Training

    b) Resources

    c) Promotion

    d) Team engagement

20. Please add any further comments you have about the blood pressure plus service

Thank you for taking the time to complete this questionnaire. Your responses are appreciated.

Appendix 5: Interview questions

Please can you tell me about the motivation for the pharmacy to participate in the blood pressure plus service?

Can you tell me about how many of the team were engaged in the service and how?

Overall, how does the pharmacy team feel about the service?

Please describe the process used in your pharmacy to identify potential participants

Overall, how have patients perceived the service?

Are you able to share a case study of one patient and their journey using the service?

What difference do you believe the service made to the local community?

How well do you believe the service supported patient understanding of cardiovascular disease and its risk factors, and why?

What difference do you believe the service made to your local GP and other health services?

Are you an independent prescriber? If yes, how would you feel about extending the service to include prescribing of appropriate medication?

What further support would you want or need to ensure the continuation of the service?

What changes would you make if the service was to be rolled out?

Coming to the end of the service, looking back what were the barriers to delivery and what were the enablers?

What advice would you give others who were going to run the service?

Do you have any other comments you would like to add?

Appendix 6: Full interview transcripts

Interview 1:

Please can you tell me about the motivation for the pharmacy to participate in the blood pressure plus service?

The boss said I need to take part so I took part. That's the reality

Can you tell me about how many of the team were engaged in the service and how?

It was three of us.

Overall, how does the pharmacy team feel about the service?

Overall the service is alright, the main problem comes to get the people that's the main problem. Advertising of it is not very detailed so when you put 'blood pressure testing inside' the majority of the people are coming in are the ones who are not really for this service. People who are already on blood pressure tablets and who want their blood pressure checked. You want to get the right person in the right category and the right time, that's always the problem.

Please describe the process used in your pharmacy to identify potential participants

So if you look at the pharmacies who took part, I don't know about 20 of us, those who took part initially, you can see that there are two or three pharmacies maybe one that's doing brilliant and then gradually the numbers go down. The ones that do really well, the number one pharmacy, is the one that is not that busy on the front or prescription wise. Their staff are more geared up for providing services. They target their patients in a way that, for example, I have seen that some people are getting text messages on their mobile, some of them even have phone calls and they're inviting them as it is a service provided by the NHS so your blood pressure will be taken. I really didn't understand how this targeting works but that's how one or two of these pharmacies you see high numbers. If you are standing on the counter and serving, people coming in this drags a little bit. You ask four people and the four people say maybe later on, I'm busy and then the fifth one comes and you don't ask, you know. You have to keep reminding staff to carry on doing it. We just asked. You keep asking them.

Overall, how have patients perceived the service?

Initially some of them say I need to go and pick up my child, I need to do this, I'm cooking this, I've only got 2 minutes. But when they've come in and had the service then they're happy. Then they think, okay, that's fine. The majority of them were happy. Only one or two patients we had were not happy to give the details to be shared with the GP and we said then if that's the case we can't provide the service. but that was only like two or three. The majority of them afterwards they are happy with the service.

Are you able to share a case study of one patient and their journey using the service?

Good experience, yeah, I can share one. I was doing an MUR with someone and we talked about some of the medication he was on. It was a blood thinner and I offered to him to have his blood pressure taken and check his heart rate. It came out that there was something wrong with it and we sent that to the GP, we obviously forwarded it. The GP called him and they sent him for some tests to the hospital and he was referred to the specialist. So I am going to go to heaven, yes. I saved one person, yeah.

What difference do you believe the service made to the local community?

it it is a good service but what happens is I think the advertising of it needs to be done a little more centrally as well as locally for example the GP's didn't have a clue what was going on initially so initially they got upset with you they said why you sending these people to us and then you have to explain to every GP surgery that this is the service going on this is what we are doing and if you thought this was what was going on in the area I was expecting yes because this is an NHS led service the NHS would have sent something to the local gp's Surgeries UN informed them that something was going on and then once they find out you doing blood pressure service then they send the other ones they are not qualified for it so someone who is on the contraceptive pill who has it blood pressure check due if they don't want to catch covid or something they say go to that pharmacy they'll do it so I keep missing these people

How well do you believe the service supported patient understanding of cardiovascular disease and its risk factors, and why?

It really depends on the area that you work. In this area the majority of the people are educated sort of level so they have got good understanding about it anyway so you are reinforcing that yeah.

What difference do you believe the service made to your local GP and other health services?

You never speak to the GP directly it's very difficult. You either speak to the receptionist or you speak to the managers. They get some understanding what's going on but once they realised a service then they dump the other ones which is not part of the service so maybe they become a bit clever for it. That's why I was saying that it would have been helpful if something had gone initially to the GP surgery that this is NHS led but these are the categories so basically they know what's going on. Because, a lot of times also, you get people coming here, say it's a plumber with six kids you try a few times and the machine cannot read the pulse and when it comes it is unknown or whatever so you have to send this to the doctors and then they get upset about it as well because they're getting referrals and then they have to do things like ECGs and all that.

Are you an independent prescriber?

No, God forbid

Do you think independent prescriber pharmacists would be happy to prescribe as part of this service?

I think you would have to ask them.

What further support would you want or need to ensure the continuation of the service?

Well, the problem becomes, the group of people who visit the pharmacy and belong to the categories that are eligible after a while, you keep getting the same people in. There is a time limit that you can run this sort of thing properly. After that they say ‘you asked me last time.’ You see the same people so I don't know if it's a one year or a two year. You can't carry on doing it

What changes would you make if the service was to be rolled out?

Equipment wise I don't think you need that much equipment for this service but it's just the technical part they get stuck with so you get the machine that's checking your pulse and there's something wrong, then you have to get that attached to your email and from that email you have to send the attachment to pharma outcomes.

Sometimes this technical part they get stuck.

What advice would you give others who were going to run the service?

Basically the problem is the staffing. When I said three people were involved in this pharmacy it's not that three of us were there at the same time so it is the staffing issues, the other things that we need to do, the covid things at the moment, and the other services that we need to run. And you know how pharmacy is sometimes you stand here and nobody comes in and then suddenly the door opens and there was a queue and that's the problem. The staffing. As I said, if you check those ones that are doing better are the ones that are more geared up for services and are less busy on prescriptions and less busy when people who are walking in, yeah, they provide this service better

Do you have any other comments you would like to add?

I'm looking forward to retirement

Interview 2:

Please can you tell me about the motivation for the pharmacy to participate in the blood pressure plus service?

So I think generally in pharmacy one of the things I always say is that we are underutilised so is a chance for us to show what we can do and what kind of numbers we could do and effect that can have on peoples health. So the staff found it very rewarding. They were able to find people who were unaware of high blood pressure and how we could help them.

Can you tell me about how many of the team were engaged in the service and how?

We had everyone whoever works in the dispensary so throughout the two years we had a pre Reg, one ACT, two pharmacists, one trainee technician and one dispenser so they regularly used it. one of the keys is always having somebody available to provide the service rather than just relying on one or two to get the numbers we were looking for. Others, they would look out for people who are eligible for BP checks On prescriptions and then when the number of staff was handy there were also asking people they if they would be interested in having their blood pressure checked and we were able to recruit people that way.

Overall, how does the pharmacy team feel about the service? Please describe the process used in your pharmacy to identify potential participants

A lot of the time doing prescriptions we can see if they were due one or if they were over a certain age on certain medications we would put BP at the top and people would do it. the other thing we were doing we had things like travel clinics or flu vaccines we could see peoples medication they were on and their age and that was an opportunity to take their pressures as well.

Are you one of the pharmacies who did really well in the service then?

I believe so , the whole team were behind it. There was one point we were hitting some really good numbers and we would have get pizza on a Friday, so just to keep them motivated. At one point we were trying to do lots of flu vaccines at the same time. We were hitting about 20-30 blood pressure checks a day. Really good for the numbers side of things.

Overall, how have patients perceived the service?

Generally, I mean, there were a few people who refused to consent, but generally, everyone was wiling to do it. There were a few like who refused to take part and there is nothing we can do about that when someone doesn't give permission, so, yes, but the vast majority were happy to do it and the people we identified, they were obviously really happy that we found something they wouldn't have found otherwise and so, yeh, we have seen them go onto certain blood pressure medication and so forth. It is quite rewarding for everyone involved.

Are you able to share a case study of one patient and their journey using the service?

There is not one particular one. I can tell you the most recent one about a month, 6- weeks ago maybe. A gentleman came in for his flu vaccine, over 50. He had received a letter from the government saying to have it. It was the first time he had had it ever as generally he always feels o.k. Blood pressure reading said that his blood pressure was a bit high, so we recommended he takes a log and takes it to his GP and we let the GP know too. The GP started him on medication. We also have the new medicines service. I wasn't actually involved in the blood pressure readings and all that but I was doing the NMS on him, and he was like 'it was all identified in the pharmacy in the first place, so thanks for flagging this. '

And we the were checking on how he was getting on with his blood pressure medication and it was working, coming down. Not as much as he had wanted at the moment but he had only been taking it for 2 weeks at that point. It just shows how one service can lead to another service too.

How well do you believe the service supported patient understanding of cardiovascular disease and its risk factors, and why?

Obviously, every time we are asking about stop smoking.if someone is smoking, for example, there are a few we referred to the stop smoking service. Obviously we are kind of out of it at that point as we don't know what happens to them between that point and quit 51. There are also some people who don't want to quit and there is nothing much you can do about that, we can just offer the service. We didn't see too many people needing referral for alcohol, but, having the chat did give us a chance to reenforce some messages. We have a poster up showing the number of units in each kind of drink in the consultation room and we used that to remind them how many units something is and what the recommended daily allowance or weekly allowance is nowadays. Also physical activity and weight management. We run a weight management service as well in the pharmacy. We did have a couple of people sign up to our slimjection service as well it so, it did make a bit of difference.

What difference do you believe the service made to your local GP and other health services?

From the ones we have had any correspondence from, they are all very thankful. It is something that helps with their records. The only issue we have is reporting services, obviously pharma outcomes wouldn't give the figures a lot of the time. It would say they have had a blood pressure check and this person had elevated blood pressure, but we would then need to go in, as the doctors would want to see what the actual numbers are, so then we would have to go back into the persons records and find the actual consultation records and then send that to the patients GP which is obviously extra steps. If it was to be a proper service I am hoping there would be an easier way straight onto the doctors records rather than having to go back again as it increases workload.

Are you an independent prescriber? If yes, how would you feel about extending the service to include prescribing of appropriate medication?

My wife is. She is very comfortable prescribing as she works in a surgery doing those kind of things. She would feel very comfortable. For myself I would need to work towards getting at least some sort of supplementary prescribing to do anything like that but I think we have that facility and we would be very happy to push that forward. At the moment we are transferring everything to the GP surgery for them to take on the responsibility.

What further support would you want or need to ensure the continuation of the service?

We found towards the end, with the pandemic and everything we have been hit with the news of this new variant, not all the team were as comfortable spending more time than they needed in the consultation room. It is something we still need to do but we weren't pushing those high numbers as in previous months. Perhaps one or two, for example. More support with regards to, we found, at the end of the pandemic, that it was harder to get hold of the leaflets that we were giving to people, so having to try and make things last longer is a bit of extra work on our side. Initially we were given booklets and we would just write the figures on there and it would tell them what to do and all the other bits and pieces.

What changes would you make if the service was to be rolled out?

I think it runs o.k. I know ideally, in an ideal kind of thing, we would have the ability to push other things from there and follow them up, for example the stop smoking service, we don't run it so we can refer but we don't know what happens their end.

Blood pressure medication, like you say, a lot of the time we get the prescriptions for the new medicine they are on, they are really our patients, but there were some patients we were getting from further afield from other parts of Surrey. Lots of those came in for the flu vaccine back in October (2020) time and so then we don't know how that pans out afterwards. That's it probably. The majority is mainly the lifestyle changes which we do at all opportunities.

What advice would you give others who were going to run the service?

Staff engagement is really important. But I can understand some people are fearful. To be honest, I have too much staffing! But I would rather have that and be able to offer this service and make it successful rather than not having enough and missing out on being able to do something to help the community. I can understand that with this pilot people aren't sure how long it will run for, how much they will be able to push it, so there is a little bit of reluctance there sometimes, but sometimes you have to not just dip your toes, but jump in and do it and go all out, get the team together and say lets make this. You can easily cover a member of staffs wage by being able to do enough checks if you have time. Make the investment.

Do you have any other comments you would like to add?

No, not really. I look forward to hearing that there will be further developments. It has been nice to be involved in it.

Interview 3:

Please can you tell me about the motivation for the pharmacy to participate in the blood pressure plus service?

I think, well I have always been interested in doing it, but I think we were a little bit late when it first came around and I basically constantly bombarded the LPC with emails and they did say 'absolutely fine, no problem, when someone drops out we can get you on board and basically that's how it all came about.

Can you tell me about how many of the team were engaged in the service and how?

Just me at the moment because we did start during Covid.

I had training on the cardio machine, the ECG testing device and obviously blood pressure we have been taking for years. We already know how to take blood pressure anyway. Then it was just getting familiar around the system, finding out how to input the records etc. I did have training for about 15-20 minutes but that is all that it needed anyway.

Overall, how does the pharmacy team feel about the service? Please describe the process used in your pharmacy to identify potential participants

They support me but lack of footfall at the moment isn't helping us. So that's the main thing. Everyone is happy that we are doing it and if anyone asks about blood pressure they always signpost me. We have used social media to try and attract people into the store to get it done, but I think, unfortunately this lockdown has been really terrible. So that has hampered it. We have posters up and social media, but our issue really is that we can only recruit those who are not on blood pressure tablets already and those that are over 35.

Overall, how have patients perceived the service?

I think they have thought it was a good service. The fact that they get three readings. We take the highest one of both and give them a record to take to the doctors. Now, we have actually found someone with AF, we found someone with extremely high blood pressure e.g. 190, so they have obviously been signposted to the correct people.

With the AF device, the people love it! Oh they love it. The fact that they are seeing that on my phone when they put their two fingers there. They think it is really different.

Are you able to share a case study of one patient and their journey using the service?

The lady that had 190, she really stood out. Because it was consistent across three readings, and at that point I actually phoned the GP surgery straight away just to get some insight into their thinking and they were like 'A and E straight away.' I am just doing to try and find her record. Unfortunately she never came back. That happened a week before Christmas so I never managed to get back in touch with the person to find out the outcome.

So this is another patient I had before Christmas. They had postural atrial fibrillation. The blood pressure wasn't as high as I said, but it was high. Highest was 159, lowest 89 and possible AF. I sent this directly to the surgery via email and also printed it out and sent him with a copy of it as well. But again, I haven't had feedback since then.

What difference do you believe the service made to the local community?

Basically we mailshot the local surgeries, so obviously, the big surgery in the area used to have a self cuff, you put your arm in the cuff, it blows up, it prints out your measurement and you take that to the GP appointment. Obviously they can't use that at the moment so if they are not actively seeing people at the moment for anything that's routine, so we have told them that if someone is over 35, not on blood pressure medication and needs a blood pressure check, they can be seen by us and we will follow up with the results via the patient to yourself, we can print them out and they can bring them back in for you. I think it is just a weird time at the moment unfortunately. We use social media, but unfortunately whatever you do, its just that, people are not thinking about blood pressure. They are stuck at home. But I guess once all this finishes it is going to be then that they start. At the moment people are busy with home schooling, etc. they are not looking after themselves. We have an on site opticians. They used to test five days a week. They are down to testing once a week because people just don't want to come out, and as we said, if you are home schooling the kids are at home so they can't leave, so it is across the board. I was at private clinic training at the weekend and all pharmacies were saying the same thing that footfall is really down. It is the polar opposite to the first lockdown where footfall was massively up. People are staying at home. People are increasingly getting deliveries. We are doing a lot more deliveries from the pharmacy.

How well do you believe the service supported patient understanding of cardiovascular disease and its risk factors, and why?

So I saw someone last week and her blood pressure, she has never had any blood pressure issues. Her diastolic was fine, around 80. Her systolic was 159. So between 150 and 159 and what I said to her. At that point it says for you to monitor for the next seven days. She wasn't happy doing it herself at home, so I said, look, just come in for the next seven days to us and we will be able to do it and I am not here one of my other colleagues will do it and we will write it down. I think it got to the Friday and she had been in for about 4 days and she said 'I think I am going to take this to the surgery now, so she went off to the surgery. But I went through her diet. She was a non-smoker, she didn't drink. She did a lot of yoga and meditation. But then when you delved in a little bit deeper I said 'is there anything you are worried about?' she was obviously someone who wasn't working as she was a little bit older. She said 'well, we were supposed to have an extension finished by Christmas, and it hasn't even started yet. So straight away you think 'o.k.' everything is packed up in boxes and you are living like that which can stress people out. So I said 'do you think it is that?' It potentially could be. And then she said that for some reason they had started to increase the salt in their diet. I said it could potentially be that but it could be a combination of both, in particular that you are increasing your salt and are undergoing stress. You wouldn't normally talk about increasing salt, so if you are mentioning it it must be on your mind. You get into those conversations.

What difference do you believe the service made to your local GP and other health services?

The GPs are very receptive. As I said, I consulted them, and I have referred them to out of hours. I think it was a Saturday and Caterham Dean, our local hospital, they are doing an out of hours service, so I consulted the gentleman there, because I was quite worried about the person, but the GP was not worried and he thought he would be o.k. til Monday morning if nothing changes. So I think the GPs have probably realised how important pharmacies are in all aspects, just because of this pandemic.

Are you an independent prescriber? If yes, how would you feel about extending the service to include prescribing of appropriate medication?

I am. This is the thing. Regarding blood pressure I would probably be a little bit apprehensive. But having done, I am going to be quite honest here, I did my IP about 5 years ago. It was an eye opening experience, it was great. But I never came out confident enough to take it to the next level. As I said, I have just done walk in clinic training which was proper hands on for two full days, so taking blood pressure, listening to the chest, looking into the eyes, looking into the mouth and throat. Actually on people. I was so confident I actually did an ear consult this morning and that confidence. Yes, if we can have some practical help with how, what to prescribe in the first instance and what to move on to, and how to do it. Obviously if you have swelling in the leg and things like that you are thinking about diuretics and things like that, but, there are some things I would be confident in prescribing but potentially not blood pressure.

What further support would you want or need to ensure the continuation of the service?

I don't think so. I think it is absolutely fine. Potentially more NHS marketing, because we can post all day long on facebook and social media but if there are not friends of our company they may not see it. But that is a matter. That is our big push this year– social media. We are going to try and be all over it in all the various things we do. I think that is where everyone looks now.

Coming to the end of the service, looking back what were the barriers to delivery and what were the enablers?

I think it is important that we make a difference. The recruiting is the hardest bit at the moment because of lack of people coming in, but it is definitely a worthwhile service.

What advice would you give others who were going to run the service?

No, I think pharmacists are in a good position to do this. There is no problem there. Probably talk to patients. If it is high, try and find out why.

Do you have any other comments you would like to add?

No.

Interview 4:

Please can you tell me about the motivation for the pharmacy to participate in the blood pressure plus service?

I thought it was a good service to diagnose patients that may have high blood pressure or hypertension in the community.

Can you tell me about how many of the team were engaged in the service and how?

It has been mainly me but the other staff have also been involved in finding patients that would be eligible.

Overall, how does the pharmacy team feel about the service? Please describe the process used in your pharmacy to identify potential participants

It has been very positive. Everyone has been positive about it. How we find patients who are eligible is using their medication history. So when we are dispensing medication we will look at what they have had in the past, whether they have had blood pressure tablets or statins before. If they haven't and if they are over 35 it probably means their blood pressure isn't being monitored by the GP so they are eligible for the service and we put a 'nominate' on the prescription so we know to ask the patient when they come in we can discuss the service with them and see if they would be interested. There have been a few walk ins, a handful, not many. Mainly it is when we find them on the system.

Overall, how have patients perceived the service?

It has been very good. We have even found a few who have been referred to the GP. There was one patient who actually had a reading, which was extremely high, above 140. We told her she would need to see the GP as soon as possible. She was a bit hesitant to see the GP as she didn't want to take blood pressure medication, so I informed her what was possibly the drug that she would be taking, just explained to her it would be a calcium channel blocker or ACE inhibitor as she was over 55 it would be a calcium channel blocker.

Are you able to share a case study of one patient and their journey using the service?

I would have to think of others. There probably has been. My mind has gone blank.

What difference do you believe the service made to the local community?

I think it has been positive for the community. Like I said, being able to find patients who are at risk. Its been good. And the feedback has always been positive after we interact with patients. They say how grateful they are for the service. Going to see the GP can be a bit hard so the pharmacy being able to provide the service is quite beneficial.

How well do you believe the service supported patient understanding of cardiovascular disease and its risk factors, and why?

A lot of the time, if I am honest, the patients already know about how they can impact their lifestyle to deliver healthy living. Mainly because of adverts they have seen or other ways. They are already aware most of the time. Drinking more water, exercising, limiting saturated fats etc. etc. yeh. Although they already know we try and emphasise it.

What difference do you believe the service made to your local GP and other health services?

We haven't heard anything bad from local GPs to be honest.

Have they referred anyone to you?

Yes, we have had some referrals. Some people haven't been eligible for the service but sometimes we have done the service. It is good to do it.

Are you an independent prescriber? If yes, how would you feel about extending the service to include prescribing of appropriate medication?

No, but in the future I believe I would feel o.k. about prescribing.

What further support would you want or need to ensure the continuation of the service? What changes would you make if the service was to be rolled out?

I think it is pretty fine at the moment. We put all results on pharma outcomes.

Coming to the end of the service, looking back what were the barriers to delivery and what were the enablers?

Barriers, erm. I would say maybe the patients not being aware of the categories sometimes. That is the only one I can think of. For example, sometimes they are already on blood pressure medication but they still want to do the service, or they might be under 35 and still want to do the service.

The enablers – I would say the team. Flagging people who are eligible, asking patients, yeh.

What advice would you give others who were going to run the service?

I think the system is very effective in my opinion looking at patients medication, flagging them up when you are running the prescriptions. I would say that is an effective process. It has been a smooth service. It runs by itself. Each consultation takes about 15 minutes so not too long.

Do you have any other comments you would like to add?

Not that I can think of.

Interview 5:

Please can you tell me about the motivation for the pharmacy to participate in the blood pressure plus service?

I would say we get a lot of people coming who need blood pressure checks anyway, especially at the moment with the surgeries not doing them. And then with the amount of questions we get with new blood pressure tablets or if they are not sure what they should be doing about their blood pressure, this service is good because we can find out, especially, when something doesn't seem quite right or its just not how it should be, at least we can relay that to them and it gives them an understanding and it is somewhere in between ourselves and the GP surgery. It is just ease of access for them, it is just something else we can offer on top of our services.

Can you tell me about how many of the team were engaged in the service and how?

I would say four altogether depending on who is in

Overall, how does the pharmacy team feel about the service?

They are fairly happy. I think the main thing is as long as we have the numbers and we can give the time. That is the main thing, but we are generally fairly comfortable. It is not a difficult thing to do. Most people are fairly happy to learn how to do it. It has been good.

Please describe the process used in your pharmacy to identify potential participants

Mainly through, I would say we got most of them through, either reviews from MURs or general queries when they come in asking about their blood pressure, or if they want it to be checked, or if there is a medication error.

Overall, how have patients perceived the service?

It has been good. Definitely a good reaction. They are just grateful that we have the time for it basically, that's all.

Are you able to share a case study of one patient and their journey using the service?

I had one fairly recently. A few weeks ago. I had someone come in. he was a bit concerned about his pulse rate. He thought his heart was going a bit quicker, so obviously we took a blood pressure for him, and it turned out quite high. And his pulse turned out quite high as well, so we got him to come back on a couple of occasions during the same week so we could monitor. He was also going through quite a stressful time recently as well. Anyway, he came back a few times and it was still the same so we sent him to his GP. So he has done that and since then he has had, been prescribed a new medication for his blood pressure. Funny, just this morning I saw him for another check and it has come down quite nicely. He is very appreciative.

What difference do you believe the service made to your local GP and other health services?

I think it has been received fairly well. I think, well I say I think, the GPs are fairly happy because they are not able to do things at the moment themselves at least then they know we provide that service for when anyone needs a blood pressure check done. I think they are happy. It is hard for them at the moment.

How well do you believe the service supported patient understanding of cardiovascular disease and its risk factors, and why?

I think it has made a different. I myself, I try to explain what the numbers mean in a blood pressure, they don't know a lot of the time, so hopefully I am able to provide a bit of information, and just give them an idea of why we are looking for certain numbers. They are sometimes surprised by some of the lifestyle factors.

Are you an independent prescriber? If yes, how would you feel about extending the service to include prescribing of appropriate medication?

Not currently. If I was, I think it would be really beneficial. I can certainly see it working in community pharmacy and I could see it as a good thing going forward.

What further support would you want or need to ensure the continuation of the service?

I think it is quite good. I can't think of anything at the moment anyway. It is easy to use and straightforward to record. I am happy.

What changes would you make if the service was to be rolled out?

Each intervention takes only about 15 minutes. We have enough resources, so I can't think of anything.

Coming to the end of the service, looking back what were the barriers to delivery and what were the enablers?

Barriers – I think the only thing that might cause a problem is the actual machine not working properly sometimes. But we have only rarely had that issue. I think that is the main barrier. In terms of resources, here we are fairly well set up to deliver this sort of thing. We have the space and we have the time as well.

What advice would you give others who were going to run the service?

I would say. This is a tough one. I would say, make the most of every opportunity in terms of people coming in with questions and even with over the counter medications or just queries about their health. Use this service at every opportunity.

Do you have any other comments you would like to add?

I would just say, it has been a very beneficial path and service for us to provide. It is good to be recognised and not just doing it for doing sake. It is a good use of our time and worthwhile for us, as well as the patients, obviously.

Interview 6:

Please can you tell me about the motivation for the pharmacy to participate in the blood pressure plus service?

We have a keen interest in cardiovascular health so that was the first point we really wanted to get involved when we first heard about it. it was a no brainer for us. we have a keen interest in cardiovascular health ranging from the standard cholesterol to blood pressure to just generally making sure people understand about cardiovascular health. It was a good opportunity for us to take part in that. We also support the Blood Pressure Association so we are actively involved with all that. as I say this was a real opportunity for us to help support the local community but also to support the vast majority of people that came to us and are local to us.

Can you tell me about how many of the team were engaged in the service and how?

We are all involved but actively involved in terms of getting people into the service we've probably got about 3 but I have got myself and another pharmacist actually involved in undertaking the service and driving it forward

Overall, how does the pharmacy team feel about the service?

The service is great because it allows an opportunity for those who walk in to ask about the service . this is for those that perhaps blood pressure is something that might be contributing to symptoms or it's something they haven't really had monitored before but feel that they should do because they have a family history of cardiovascular disease or other vascular issues they have driven them to want to get it checked and then that has driven interventions so it's a really positive service.

Please describe the process used in your pharmacy to identify potential participants

Information about the services offered on our website and we actively talk about it. we informed all of the GP's around us that we are undertaking the service so they can then refer into the service into and then obviously word of mouth as well particularly patients and customers saying that this pharmacy is offering the service.

Overall, how have patients perceived the service? What difference do you believe the service made to the local community?

The feedback we have received from patients has been great. we say to them we're going to do a service and take their blood pressure and we're going to take your pulse and then if there are any issues we may also undertake on ECG as well. we have provided education. we appreciate that's not part of the service. Our consultation room has been designed to provide blood pressure education. So we have posters of high blood pressures and hypertension and we have added in some apps onto our ipad so when the patient comes in they can physically see what are good working heart looks like, one with atrial fibrillation and also we use graphics on the computer when we have taken the blood pressure to show that these are your numbers but what do they actually mean visually so we plot those numbers and show them where green is where Amber is but actually you were in the red zone. So that takes us to the next step of what we are actually going to do about it and how are we going to work with you to drive that down. what do we need to do to support you to do that. We then go into the full information be it lifestyle, drinking alcohol, all the other things that need to be talked about in relation to it.

How well do you believe the service supported patient understanding of cardiovascular disease and its risk factors, and why?

In a lot of cases it has been ‘I didn't know’ I didn't know about salt I didn't know about just walking can increase my heart rate and it has to be something that increases my heart rate. all the things about what can I do exercise wise what can I do but we have good inputs in terms of reducing weight. a lot of things about that. okay I have π blood pressure but how can I monitor that when I'm at home. educating about how they can actually take blood pressure. how to set how to put the cuff on ET cetera, what monitor is the best for them to use at home. we then invested in getting blood pressure monitors in store so we have one that has been affiliated and signed off which allows us to explain how to use the blood pressure machine at home and again the patients have been using it and they are saying at home I get this reading. some of it might be white coat but actually it's because they haven't been using the machine correctly. there are lots of things we have been able to do to provide positive outcomes but also where there hasn't been great results we can have interventions by the GP's to start treatment for certain patient groups but equally there are certain treatments patients have been having, for example, we have had patients with migraines who have been on beta blockers that have been really affecting them so they thought they hadn't been feeling well on it a bit bradycardic then actually when they had a review they didn't actually need these medicines in certain circumstances and we have had patients come back to us to say they feel great.

Are you able to share a case study of one patient and their journey using the service?

I think the point I made about the bradycardic one. That is a really good example of a young fit male who basically just had a history of migraines but he had a number of treatments for that one of which was beta blockers but he had issues of being bradycardic palpitations sometimes waking up in the middle of the night gasping for air. We said it is likely to do with his beta blockers so it's worth getting that checked out. we did indicate that he should be reviewed so he went in and had a review with the clinician, we had a chat with the GP they obviously had their medication reviewed and stopped and they came back and said they were feeling great and didn't have a migraine.

What difference do you believe the service made to your local GP and other health services?

All the feedback that we have had from the GP's has been really really positive. they appreciate the fact that this service is offered through community pharmacy and we are able to see patients whether they walk in or will have been referred. whether it be positive results or negative results and what interventions are required they have a really good basis to start that from, especially I would say where the readings have not been that great. it has supported the next steps. I think I mentioned this in the questionnaire as well where there are things that could have been expanded a lot more to incorporate other patient cohorts especially those who take the contraceptive pill. that's a real big area where blood pressure is really important in parts of the initialization of treatments and also in terms of continuation of treatment.

Are you an independent prescriber? If yes, how would you feel about extending the service to include prescribing of appropriate medication?

I'm not but my colleague pharmacist is. My colleague specialist area is hypertension so that's what they did it in. we would encourage that we would be want to do that. everything is good to undertake that anyway so they would love that.

What further support would you want or need to ensure the continuation of the service?

First of all I think it was a really good opportunity to see what this service can do. it was also a really good opportunity in terms of its spec as it stands. I think there is huge opportunity to expand that to those who have the skill set to do so, so in our case I think there is a huge opportunity for us to monitor those who were already diagnosed as having hypertension, perhaps those that are newly diagnosed in the first six months up to a year making sure that the treatment plan that they are on is one that's working for them and also if it isn't we can utilise this service to leverage that they are on the right treatment plan working with our fellow GP colleagues it is essential to monitor the patients. I think that is really key. those who are currently on hypertension medicines, those who are not on hypertension medicines and then those who require blood pressure monitoring because of treatment they are on or they have a medical condition that requires monitoring.

Coming to the end of the service, looking back what were the barriers to delivery and what were the enablers?

Barriers I think probably have been covid. covid has probably been the key barrier. we would have liked to see more patients but we completely appreciate that hasn't been possible in the short term anyway. Equally recruiting patients there is never going to be enough that you can do to educate and inform patients that you are running the service , getting support from stakeholders to say these are the pharmacies offering it and perhaps working with people like the British Heart Foundation or other associations that could help refer in to us. that would be great.

What advice would you give others who were going to run the service?

I think the advice I would give is you can run the service as the spec dictates it. you can undertake a blood pressure and say here it is and that's it but I really do advocate the fact that you need to be able to set out the background and provide that education so people, patients understand customers understand what these numbers mean. without that background without that education knowing those numbers is a real key to making sure that blood pressure is taken as a serious measurement of one is health. when you look in the mirror you can't see anything but when you actually undertake these measurements you can understand what the implications are to various conditions.

Do you have any other comments you would like to add?

First of all I would like to take the opportunity to thank all the stakeholders who have been involved and especially those who informed us about this service because they were fantastic when we were setting up and we didn't know much about the service but from the NH S to the LPC everyone has been fantastic in making sure that we had all the information we needed to undertake the service. so a big thank you to everyone regarding that and I hope we can carry on. it has a big impact on the local and wider community.

Interview 7:

Please can you tell me about the motivation for the pharmacy to participate in the blood pressure plus service?

The motivation was really to get more people coming through the door to increase footfall in whatever way possible. this pharmacy has always been very service driven. we have taken part in the majority of the pilots that happened for any new service. I love doing that to be honest with you. I love being involved in the infant stages of something that is coming. So really it was just that.

Can you tell me about how many of the team were engaged in the service and how?

There are in total four of us that are involved. I have two dispensers a pre reg and myself

Overall, how does the pharmacy team feel about the service?

They loved it, they absolutely loved it. There was a financial incentive. as a group we did the bonus for any services done and that is a very big driving factor they all loved it they enjoyed it

Please describe the process used in your pharmacy to identify potential participants

It is done at the very beginning of dispensing. The dispensing stage itself. we use the variety of way to recruit. One of the ways was during the dispensing process, the dispenser, they would identify potential people. Aged 35 plus and not on any other heart medication already. So that is a very easy identification process. And they would identify. We had little stickers that we would stick on. We decided that the red colour dot would be the BP plus and that was highlighted. Counter assistants were trained that if they saw a red sticker they should immediately refer to one of the trained members. To be honest that recruited the maximum of the people we done.

The other way was opportunistic, and that was through posters in the pharmacy itself. We also had a note on our website and we had leaflets we put in every bag. The majority were recruited through intervention on prescription.

Overall, how have patients perceived the service?

Most patients loved it. You know it is one of those things that you think ‘I should get it checked once in a while’ but they never really got round to doing it. So it gave them an opportunity to let them do it. We made it easy basically. We said it would only be 5-10 minutes, we would sit in the consultation room, or if they couldn’t do it today we would book them in. it worked well. Obviously with Covid, everything changed. But at that point in time it worked really well.

Are you able to share a case study of one patient and their journey using the service?

Oh yes, at the very beginning, in the first few months of starting the service, we had one gentleman who we found with irregular pulse and his blood pressure was very high. We did three readings. Very very high. In the region of 180. So we said does he want to go back. He lived quite local. We asked him to come back in the evening as it was morning time and we would check again, and see if it is any different. He came back in the evening, same story. We referred straight to the GP and he is still on the same cocktail of drugs that he was put on at that point. It was one of the first. I think that motivated the staff even more because they could see they had done something and benefitted somebody. They watched the whole

process. That was in the first few months of us starting the service. There is loyalty. He always comes to us for his prescriptions. He family comes to us. He always mentions that we brought this up. It was a case of 'I get these headaches, but I am not too sure.'

What difference do you believe the service made to your local GP and other health services?

The GPs are o.k. about it to be honest. It has taken away a lot of pressure from them, because it is just one of those extra things they have to put aside and ask a nurse or a health care assistant to do. So obviously it only benefits a very small criteria of people but they were open to it. They never resisted which is always good. I don't think they actively referred anyone as such but they made it known that people could come down to the service.

How well do you believe the service supported patient understanding of cardiovascular disease and its risk factors, and why?

That has been good as well. We ordered lots of those booklets from the British heart foundation. They are very handy, and use very simple terms. No crazy terms or pharmacy or scientific terms. When it is broken down into simple terms people feel they can actually do it. Rather than just saying 'you need to change your lifestyle'. So those helped a great deal. I would vouch for those BHF leaflets.

Are you an independent prescriber? If yes, how would you feel about extending the service to include prescribing of appropriate medication?

No, but I think it would be great. It would be even more welcome. As I said earlier, to replace the journey and have an outcome from it is what motivates pharmacy staff more than anything else. Being able to see that journey completed with a positive outcome so I think if an independent prescriber was to take that last step in here as well, then, yeh. It would show tangible evidence of what we are doing.

What further support would you want or need to ensure the continuation of the service?

Maybe regular little training updates, or training information. Particularly related to risk of cardiovascular disease, so, not percentages or anything, but say, for example, you can cut out, having blood pressure for so many years can cut out so many years. Cutting things out can reduce your risk by so many percent, they don't understand these terms, so a little bit of training like that. There was never really an update like that. It was more like 'how many have you got done.' It was never like, this is new information coming out about cardiovascular risk – look at this, read this. This is interesting information. None of that. So in a way it was a bit of an open process. You started it and you were left with it.

What changes would you make if the service was to be rolled out?

With Covid, it is really hard now, as we haven't really done any. We have done an odd few here and there, but with a load of apprehension from both parties, provider and user, but because the need exceeded the situation or they felt there was no other way. They couldn't get to a GP, they were really worried about what their BP was, or about their health in general, then we have done it, but there was no real drive to do it. We easily could have said no, as we don't want extra risk. I don't know what I would say about support as it is a very different scenario.

Coming to the end of the service, looking back what were the barriers to delivery and what were the enablers?

Covid was the barrier. I think the enablers were general awareness. You know the shift has happened about people doing more exercise, better life style. In such sections of the population that is a good thing to do, it keeps you in fashion. So I think that was a big thing. Like I say Covid has changed things. Before Covid everyone had an office job to do. They sat in offices for 8 and a half hours and couldn't get out so that was a barrier. They didn't have time to do anything.

Obviously that isn't something we can solve. But it was a general, the first thing people said. So I don't think that counts anymore but the conditions are not different. Now our biggest barrier is that we are providing covid vaccinations in this pharmacy, so that has taken everything of our time, so if we want to do a service like this, we are doing some other enhanced services. It means we have to book in appointments, and we are limited with the time we have, as we can only do it when we have breaks from the covid vaccine. It still means we have to disinfect the whole area.

What advice would you give others who were going to run the service?

Take it as a service with additional value, not something that just takes up time in doing paperwork. In a pharmacy all services come with a whole ream of paperwork, that you have to carry out, and that usually puts off everyone in the team, and they think it isn't worth it. If I am going to do a service for 2 minutes but it is going to take me 15 minutes of paperwork I am not going to bother. This is the biggest thing we found for this service. It was very simple. It was on pharmaoutcomes and you did it as you went along actually. so the time value you spent on it was very good as it was almost an instant return. So I think, pharmacies that have the capability to do so should definitely do so. It increases patient foot fall, it increases patient loyalty towards you. You are looked upon as a good source of information, not just something you read on the internet and I think in general it is good for the team as it boasts morale. We championed 2 people to run it. It boasted them that way. I think any pharmacy who is not doing the service should do.

Do you have any other comments you would like to add?

I think it doesn't always have to be the pharmacist involved. Pre-reg pharmacists are great. We just need to trust them.

Interview 8:

Please can you tell me about the motivation for the pharmacy to participate in the blood pressure plus service?

I think it is a really good service. Blood pressure is a hidden disease. It is a silent killer. Both my parents have blood pressure and their parents. It runs in our family. I think it is really important. I think men especially don't look at their blood pressure. But it can lead to things like heart failure and heart disease and things like clots in your blood so just raising their awareness is what we were trying to do. And with women, we anyway do blood pressures because the surgery sends all the people on the pill to us, so we do women anyway, we wanted to do men as well and this was a good way of doing it. Especially with the cardioapp that we were given, with the finger think, that really impressed people. It is such a small thing but you could easily see it in the community pharmacy, so when Hinal approached me and showed me all of this I was like, boom, wow. Why shouldn't we do it. Anyone would be silly not to go for it. It is a free blood pressure check and a heart check. I was really excited about it.

Can you tell me about how many of the team were engaged in the service and how?

All of my team are involved actually. so I have three pharmacists and two dispensers and my counter assistant, so 6 of us involved.

Overall, how does the pharmacy team feel about the service?

There are really happy to do it. It is an easy service to do as well. It is not that difficult. We all know how to use the blood pressure machines. It is an easy one to do. There is very little training needed. It is easy for me to put all my staff on it. So if I was busy someone else could do it. Even recording the information is very straight forward. If I was busy someone else could do it. For that is good. The main thing that stopped us getting the numbers needed was people saying, surprisingly, that they weren't interested. So like, we really needed to convince them, like. 'go on, get your blood pressure checked.' They would be like 'no, I don't have time,' or 'yeh, it is fine.' You would be surprised. I was like 'really- you don't want to get it done?'

Please describe the process used in your pharmacy to identify potential participants

They can't be on blood pressure medication before and they have to be over a certain age range, so we normally, when we do prescriptions, we normally see what medication people are on. If they are not on blood pressure medication and they fit the age range we put a stamp on it and that stamp can be seen by any member of staff, whether a counter assistant, pharmacist or someone giving out the prescription, so they can, at any point, ask the patient, 'by the way' would you like to have a blood pressure check.

Overall, how have patients perceived the service?

It is such a brilliant service. The ones that said yes they were so fascinated that we could do it. As I said before, they really liked the cardioapp, the finger tip app. They, when they were women, they asked their other halfs to come in to get it done, because it is raising awareness. They were really impressed. I think a lot of people were very happy to help, happy to do it, happy to refer other people for it. They wanted more from the service. So when Hinal came out with the health checks, I was like 'yes please.' We would definitely do it. It would help to do a full health check, even a small one. They wanted more.

Are you able to share a case study of one patient and their journey using the service?

I can actually. one particular patient. I know my patients really well, as I have been in the pharmacy for about ten years. There is one particular gentleman. He has now left his job as he is a full time carer for his wife. He's not on any medication but his wife is unfortunately on quite a few medications. And due to his wifes health degrading, and they have 2 kids, I think in their teens, and he also has to care for them. I think one of the daughters wasn't taking her mothers illness very well and she started playing up and everything. So I know him as a customer and know his whole family as he has been part of the community for so long. So I asked him if I could do his blood pressure. He said no to me twice. On the third time I was like 'come on, do you have a bit of time.' I was a bit persistent with this guy. He is a bit overweight, and he is a bit stressed all the time. Low and behold, obviously his blood pressure was high, and he also had atrial fibrillation. So I sent him straight to the doctors surgery. Sent the record straight away. They saw him the same day and did the 24 hour blood pressure monitor on him and he came and thanked me a few days later as he is now on blood pressure tablets and that has been a couple of years now. If I hadn't been persistent and kept asking him god knows what could have happened to me until now. I have had four, all men actually, who hadn't really given much attention to their health and are now on blood pressure tablets due to the service we have done. That was really rewarding. And whenever staff lose motivation I remind them of that customer.

What difference do you believe the service made to the local community?

I think it shows the role of the pharmacist and gives us more importance and they can see that they don't need to go to the doctor or the nurse for everything because, before, I think, if you wanted to get your blood pressure checked you had to go to your doctor or nurse. The doctor was the only person who could read the results and know what was going on, things like that. Yes, we can't prescribe them the medication but at least we can point them in the right direction because we are in the NHS, we are part of the doctors surgery, we work hand in hand with them, so when something comes from us to the doctors surgery they do work quite quickly with it, which is good, and it is almost like a fast track system into their healthcare, so for these gentleman it was really like that which I think is really good. The main factor, also right now, is they are struggling because of covid, as no one really wants to come in the consultation room with us. Before covid struck it was good.

What difference do you believe the service made to your local GP and other health services?

At first they weren't really supportive, as their nurses do it as well, so they thought what it going on, why are you doing this but now, our local GPs have got used to it and now they are sending people to us and saying to people if they want their blood pressure checked they can go to the pharmacy. Initially it was a bit of a struggle as they were like 'why are you doing this?'

How well do you believe the service supported patient understanding of cardiovascular disease and its risk factors, and why?

The patients, when they see something is wrong then they do see it as a kick up the backside that maybe they shouldn't drink wine every night, or I should watch what I am eating, or go for a run or something like that. Also, they care about their partners quite a lot, and say, well if I get my partner on it, and that sort of thing. So it has really affected the local community and supported them to look after themselves a little better because they also know there is someone looking out for them, like I always ask them how they are now, and ask if they want me to check their blood pressure, and some people actually people say no,

because they don't want to know and I say that isn't good! But what can I do. If I don't know I don't know. Erm, not really.

Are you an independent prescriber? If yes, how would you feel about extending the service to include prescribing of appropriate medication?

I am not yet. I do want to apply for it. I know a few people who have told me to do it. If it was to be added I think that would be really beneficial, it really would. It would eliminate the factor of having to include the GP surgery, like everything could just finish at the pharmacy. It would save time. It wouldn't make a huge difference but it would make a difference.

What further support would you want or need to ensure the continuation of the service?

Maybe just the posters and stuff again. I think the main issue right now is just dragging people through the door because of Covid. Once things become safe again, things like posters and fresh gear about it would be good, so people would know that this service is still going on, and it is safe to do it and go to the pharmacy. Posters and stuff would be helpful. NHS advertising too would be good, like, go to your pharmacy to have your blood pressure checked, or something like that. It would be nice.

What changes would you make if the service was to be rolled out?

No, I think it worked fine. Oh, maybe, in the questions, you know when we ask if the patient is happy to do an evaluation, I think, before, a lot of people didn't mind, and now they are actually saying no for some reason. I don't know why. It is not compulsory so I can't force them to do it but I don't know why. I think maybe it is the thought of being bugged by someone or something like that. I am not sure. It is just the evaluation. Whenever I ask they are like 'no. why would I want that?'

Coming to the end of the service, looking back what were the barriers to delivery and what were the enablers?

Barriers would be covid and time. Patients are like 'how long will it take.' You say ten to fifteen minutes to rest before taking the blood pressure, and they say they don't have the time and want you to do it right now. Time is a big thing. And definitely covid.

Enablers were, I think, if my counter assistant asked they always said no, but if the pharmacist asked they would say yes. It is very interesting. I don't know why. So the enablers are like if they know the person doing it, or if they feel the person doing it is a responsible person looking after their health but if a counter assistant asks they would be no, why do you want to know. It is really interesting.

What advice would you give others who were going to run the service?

Go straight in. dive in. it is a fun service, and easy to do. All staff members can take part and get involved which is nice. It is easy and doesn't take much time, and it is rewarding when you do find the patients that come back to tell you that they are now on blood pressure tablets. Thanks to us checking it out. It is rewarding. It is a nice service to do. And if you do health checks, it goes hand in hand with health checks. Or a nice enabler for the healthcheck. If you have had the blood pressure check you can say 'would you now like the healthcheck?' I can check everything for you. That way it is really good.

Do you have any other comments you would like to add?

Thank you for giving us the opportunity to do the service first of all. I know we were just part of a cohort study, of about 20 pharmacies but thank you for choosing us. I hope we have proved to the NHS that it is a good service to carry on with.

Interview 9:

Please can you tell me about the motivation for the pharmacy to participate in the blood pressure plus service?

Um. We do blood pressure testing all the time anyway, so when we were approached to do it we thought we would take advantage of the scheme. You get paid for it as well.

Can you tell me about how many of the team were engaged in the service and how?

Just me.

Overall, how does the pharmacy team feel about the service? What is different to what you currently do?

Nothing really but with the pad and all that we weren't really testing all the pulse and everything we would have done with a normal blood pressure check.

Please describe the process used in your pharmacy to identify potential participants

Just mainly by looking at prescriptions or if someone is asking for a blood pressure check then we would speak to them at this point. We haven't been doing it since Covid.

Overall, how have patients perceived the service?

They were happy to take part and it was a bit more thorough than just doing the normal blood pressure check.

Are you able to share a case study of one patient and their journey using the service?

Honestly, no.

How well do you believe the service supported patient understanding of cardiovascular disease and its risk factors, and why?

To be honest, the ones that I did do didn't have any problems from what I can remember. We didn't do a lot. From the top of my head I can't remember anyone having an issue. There may have possibly have been one who was referred. Again we are going back over a year or more.

What difference do you believe the service made to your local GP and other health services?

No, I haven't had any feedback from them.

What further support would you want or need to ensure the continuation of the service?

Not really. Although they did say you could only check the blood pressure of certain categories so it was always hard to know who and what until you have taken them in and had a bit more of a conversation with them to find out that sort of information.

Where if it was, I don't know, if they were over 60 and we were just checking everyone it might have been easier to get people to want to come and do it. Rather than having to be specific. When it is just general public you can't always just say 'let me check' and then say 'hold on, I can't do you.' It was a bit awkward.

Coming to the end of the service, looking back what were the barriers to delivery and what were the enablers?

Covid was a barrier.

What advice would you give others who were going to run the service?

No, it was fine, it was just hard to get people to take part, and then having to upload the information was a bit long as well. But other than that it was good. You could do it on your phone, but then it could only be done by me, as I was the only person who had it on.

Do you have any other comments you would like to add?

no

Interview 10:

Please can you tell me about the motivation for the pharmacy to participate in the blood pressure plus service?

As a pharmacist I am just interested in doing anything that is different. I just wanted to do something for my patients that I could get involved in that was different to my ordinary job. So any service that I can do I always try. Anything new that is around I am game for it.

Can you tell me about how many of the team were engaged in the service and how?

It was one of my Saturday lads, it was my pre-reg, who was the main guy who was running it and one of my dispensers.

Overall, how does the pharmacy team feel about the service?

I think my counter staff were a little bit worried about asking people, so I think they found that quite difficult. And then once lockdown came there was no one to ask, which is one of those things. So I think overcoming those barriers was difficult. The pre-reg was definitely up for it. That was not a problem. I was up for it. The other dispenser was fine, although she is not a counter type person, she likes her dossetts and running those.

Please describe the process used in your pharmacy to identify potential participants

I think that was another difficulty, in that, with the dispensary being busy, it was mainly down to the counter staff to ask people who wanted their blood pressure taken, and the majority of people we picked weren't actually eligible. I think the problem we have is that in Banstead the majority of the people we have are elderly, affluent groups and in general already have blood pressure problems. We did have a few successes which we are quite proud of, but other than that, the majority of people we did. I always did their blood pressure, I always did their cardiochecks but couldn't record them.

Overall, how have patients perceived the service? Are you able to share a case study of one patient and their journey using the service?

I mean we did actually find atrial fibrillation in a lady in her early sixties. She just came in because she had a cough and she wasn't feeling too good, so I said lets just do the works and just check things. We checked her blood pressure which was high and we checked and she actually had atrial fibrillation. So we immediately rang the doctor up and they saw her within an hour and she was in hospital by the evening.

She came back with a very big box of chocolates!

I mean, even the ones, that didn't quite qualify for it were amazed about the things you can do with a mobile phone. Good overall response no matter what we do. Even now, if people come in for blood pressure checks, although they are already on medication, we always make a point of doing the cardiocheck for them. They just love the gadget.

What difference do you believe the service made to the local community? How well do you believe the service supported patient understanding of cardiovascular disease and its risk factors, and why?

Although the majority of them didn't have blood pressure issues or atrial fibrillation it still gave you an opportunity to talk about what their family history was like, so those that had mum or dads with blood pressure issues, then you are talking to people about lifestyle and encouraging them to come back in a years time. Quite a lot of them still do to get their blood pressure checked.

What difference do you believe the service made to your local GP and other health services?

Until lockdown they didn't refer anyone. They took on board we were doing it and were happy when we referred to them. But until lockdown we didn't do any from the GPs. Since lockdown, yes, we are doing them, but they do tend to be people on the pill, and not much else.

Are you an independent prescriber? If yes, how would you feel about extending the service to include prescribing of appropriate medication?

No. but hypothetically, definitely beneficial. Prescribing is the future of pharmacy isn't it. I think anyone who is a pharmacist should be an independent prescriber, no matter what, anyway. I have always thought that. I would promote that and push all of my pharmacists to do that.

What further support would you want or need to ensure the continuation of the service? What changes would you make if the service was to be rolled out?

Not extra support, no. the service itself is fine. I think the three blood pressure checks is sometimes not needed. I mean I was always taught that is 2 checks were within 10 mm of mercury then the third one probably isn't needed. The third one is a faff.

Coming to the end of the service, looking back what were the barriers to delivery and what were the enablers?

The counter assistants as earlier. There are always times you need to put it on the back burner and something else becomes a priority, like the flu jabs, that kind of thing. There are times when you just can't do other things, such as doing a flu jab every 3 minutes. Everything else goes out of the window. And then lock down just killed it. I think, it is selling it into staff. Once we had the one lady who came in with chocolates, I really did lay it on thick with the thank yous. It did make everyone glow, so there are definitely enablers there.

What advice would you give others who were going to run the service?

It is not that hard. You would be surprised how many people come in and just say 'can you do me that check again.' I mean I never say no, as it isn't worth it. It is well received, definitely. I think we need a different cohort of customers to make it successful. I think younger females would be a good cohort for it. Obviously the age range on the BP plus excluded them, so, yeh, I would like to do those. But to be fair I did them anyway. Anyone that said yes I would do them. It was just 75% weren't eligible.

Do you have any other comments you would like to add?

I am just really pleased to be included in it. I was quite chuffed when we were asked.

Interview 11:

Please can you tell me about the motivation for the pharmacy to participate in the blood pressure plus service?

To be honest, it fitted in with my learning as well (was a pre-reg when service started). I used to do all the services we used to run and initially I started health checks that we do here and then we got involved in BP plus, if they fit the criteria. Even if they didn't fit the criteria we used to do it anyway, but obviously not as BP plus. It was good for my learning to keep me on top of the guidelines for blood pressure, and it was a good way to interact with people.

Can you tell me about how many of the team were engaged in the service and how?

When I started doing it there were 2 of us. The pharmacist, me and there were two others too. Not as much as me and the pharmacist but they did it when they had to.

Overall, how does the pharmacy team feel about the service?

We used to advertise at the front of the pharmacy that there were free blood pressure checks available. Even if they didn't fit into the criteria we used to do it anyway. People just want a check, or if they didn't feel well. It was a useful service in my opinion.

Please describe the process used in your pharmacy to identify potential participants

Whoever was working at the front as well, as well as the advertising in the front.

Overall, how have patients perceived the service?

They were always happy to do it. It was good to get a blood pressure check done for free as well. It is always a good think. There was always positive feedback.

Are you able to share a case study of one patient and their journey using the service?

There was one. This lady came in, she just wasn't feeling too great. She was already on some medication, but not for blood pressure. She was feeling tired and run down, all those symptoms that might point to blood pressure. We just checked it out. Her blood pressure was always high coming in, as she was nervous. She thought it was high blood pressure but I told her to wait and relax before she came into the consultation room. She was grateful that it wasn't high blood pressure, just stress.

What difference do you believe the service made to the local community? How well do you believe the service supported patient understanding of cardiovascular disease and its risk factors, and why?

To be honest a lot of people were aware of lifestyle and changes to make if they have to, the regular exercise, cutting down alcohol, eating healthy. I always used to use the NHS healthy lifestyle website. I used to talk to them first and then go in and talk to them using it as a reference. I used to do it alongside vitality healthchecks too. I did it alongside advising them to bring their blood pressure down. This service links in with others.

What difference do you believe the service made to your local GP and other health services?

To be honest a lot of the surgeries around here, I used to have a lot of women coming in as they need to get their blood pressure checked for the pill, so I used to use that as an excuse to do blood pressure plus as well, as the doctors weren't doing it. Whilst they were there I

said quickly lets take your blood pressure, if they fit the criteria. I think the GPs were happy with it. Nothing bad.

Are you an independent prescriber? If yes, how would you feel about extending the service to include prescribing of appropriate medication?

Not yet an IP. But in the future….. definitely happy. I think there should be an option to make this more advanced. I think there should be, I think everyone is different in how they learn. The way I remember things like the guidelines for blood pressure is probably completely different to how my friends remember it. It is an easy nice way to show how to remember thresholds and when to intensify treatments and things like that. I remember reading the BNF and it was just blood pressure targets were just overlapping. We would need support in that aspect, but very good for learning.

What further support would you want or need to ensure the continuation of the service? What changes would you make if the service was to be rolled out?

Maybe like resources to help us promote it, so posters maybe, yeh, posters, leaflets just to let people know we are doing it, and for people carrying out, nothing that overlaps other things, so maybe clear guidelines, and made concise.

Coming to the end of the service, looking back what were the barriers to delivery and what were the enablers?

Barriers I think, just some people didn't have time. They weren't interested or weren't aware of the importance of blood pressure. I think that was the main thing. Also, getting all the staff members on board as well. Some people were wasting ten minutes on a blood pressure check and then by the time I came out there was a massive queue. Really kind of making a way of staff understanding the benefits. That is where it stems from, isn't it. If they want to do it they will. If they don't want to, they just won't bother. In terms of getting people in, I think it depends on where the pharmacy is as well. In Banstead people are always conscious about their health. They always wanted to do health checks, or get their blood pressure checked, whereas I have worked in other places, and there people don't know or don't care. putting it out there a bit more, a campaign, emphasising the importance of blood pressure. Everyone loves a freebee, so in terms of highlighting it, it might help.

What advice would you give others who were going to run the service?

Just think of it as something to help your learning. That's how I saw it anyway. Anything that was suggested, I always did it as a learning thing. It was helping me learn the nonpharmacological aspects of healthy living and all that sort of things, and then bringing in the pharmacological side too. So if I didn't understand something I could go and look it up. I never saw it as a bad thing.

Do you have any other comments you would like to add?

I thought it was a good service. Obviously it was covid that stopped it. Maybe just get it out there a bit more. I never saw a problem with it. It was good.

Appendix 7: Full list of comments from patients regarding BP+

- BP+ is a good idea
- Chair was facing the wrong way so had to bend arm towards person taking BP
- Cholesterol testing as well, would have been informative
- Excellent Service
- Exercise, healthy eating
- Give out more information/leaflet on how to improve BP through diet and exercise
- good session I am satisfied with the service received
- Great idea and quick
- I found the appointment very helpful and informative
- I had a similar check-up through SCC a couple of years ago and received a healthy result (as I did this time).
- I was really impressed with how quickly communication was sent to my doctor. I already had an appointment the next morning and she had received the letter before then
- I work in Kingston but my home and GP is in Devon. I have offered to provide any further information if requested as I am outside of the Surrey area. I have been prescribed folic acid initially and may need blood thinning drugs following a hospital heart ultrasound and appointment with a cardiologist (awaiting appointments)
- Improved technology
- It was helpful to have information about risk of irregular heartbeat
- It was very useful to me as the following visit to my GP has led me to go on a diet to try and lower my BP. No significant change yet to my BP but I have lost 13lbs so far and reduced my BMI by 2 points
- It would be useful to include a cholesterol test to give a fuller picture
- xxx was very good. thank you
- No I am satisfied
- No thanks good job all round
- No they did ok
- No, your staff member was very professional yet friendly and informative
- Not sure of the professional status of the person during the BP check as they didn't seem to me to know
- Perhaps supply visitors with some written references as to what is "normal"
- Quick & Easy
- Staff were lovely but not that knowledgeable
- The check was methodical with very clear instructions and good information
- They are good
- Very pleasant assistant but had I gone to the surgery this would have been done either by the GP or the Practice Nurse,
- Was a very good session
- what a normal BP reading was although obviously had the information to see if it was abnormal.
- Worked well. Much appreciated
- Would have liked to have cholesterol tested also
- Your rep was lovely, very professional and knowledgeable