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Qualitative evaluation of the Champs ‘Saving Lives: Reducing the Pressure’ British Heart Foundation initiative

‘High blood pressure detection through innovation’

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About the Champs Intelligence & Evidence Service

Champs is a Public Health Collaborative covering Cheshire and Merseyside (C&M). This work was conducted under the remit of the Champs Intelligence & Evidence Service. Commissioned by the C&M Directors of Public Health, the service aims to provide high quality research in response to collaborative priorities across the nine local authority public health teams in C&M.

Matthew Ashton, Director of Public Health and Head of Health & Wellbeing, Sefton Council, leads the Public Health Intelligence Network with support from Sharon McAteer (Halton), Adam Major (Wirral) and the wider network. Their role in the Intelligence & Evidence Service involves setting the work programme, providing strategic direction and facilitating collaborative links between the Champs Public Health Collaborative, the Public Health Institute, Liverpool John Moores University, and the wider public health community. They also contribute to editing and final approval of reports.

About this report

A steering group, which included a wide range of public health colleagues from C&M Public Health teams led by Mel Roche (Champs), was established in order to inform development of the report. The other members of the steering group were Adam Major and Helen Cartwright (Champs Public Health Collaborative), and Janet Ubido, Cath Lewis, Lisa Jones, Ellie McCoy and Hannah Timpson (Public Health Institute, Liverpool John Moores University).

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Summary

Introduction

Liverpool John Moores University (LJMU) were commissioned by Champs Public Health Collaborative to carry out a qualitative evaluation of the Cheshire and Merseyside (C&M) 'High blood pressure detection through innovation' initiative, which is part of the wider 'Saving lives: Reducing the pressure' scheme.

The initiative aims to tackle high blood pressure and is funded by the British Heart Foundation (BHF). The evaluation was undertaken between June 2018 and March 2019, and included a literature review and collection of qualitative data through interviews with members of the public who had had a blood pressure check, staff who were involved in delivering the checks, and wider stakeholders involved in implementation.

The 'High blood pressure detection through innovation' initiative

The initiative involves the delivery of community-based blood pressure checks and lifestyle advice in four settings across C&M, using guidelines developed by Champs:

- 1) Healthy Living Pharmacies across C&M;
- 2) Health Trainers in Halton;
- 3) Merseyside Fire and Rescue Service (FRS) as part of Safe and Well checks;
- 4) via a 'Wellpoint Kiosk' that allowed users to check their own blood pressure, as well as other measures such as weight and body fat, which rotated between a wide variety of community locations in Warrington.

Methods

We conducted interviews with 39 members of the public who had had their blood pressure checked in one of the four settings. We re-interviewed six participants, 2-3 months after their initial blood pressure check to discuss any changes that they had made since the check. Case studies, which illustrated the emerging themes, were developed from these interviews. We also conducted interviews with 15 members of staff who were involved in implementing or managing the initiative in the four settings, as well as 11 wider stakeholders. Wider stakeholders included GPs, staff who were responsible for implementation and management of the kiosk, and members of the BHF project steering group for C&M.

Findings

Is high blood pressure detection outside of general practice acceptable to the public and able to reach those previously 'hard to reach'?

This evaluation found that offering blood pressure checks outside of general practice was acceptable to the public across each strand of the project. The members of the

public that we interviewed, in general expressed that they were happy with the blood pressure check that they had had and said that they would be happy to return to have it done at the same venue again.

Among members of the public, we identified that important features of the initiative were its convenience, ease of access and the preference for a familiar, non-medical setting. Our evaluation also identified that the initiative was able to reach members of the public who stated they would not want to 'trouble the doctor' for a blood pressure check. This suggests that the initiative has successfully reached people who would not otherwise have engaged, using an inclusive approach. The kiosk and Health Trainer strands of the initiative included a workplace-based element, and this had an important role in facilitating access to a large number of people, especially men, who may not have otherwise had their blood pressure checked.

Having more control over when and where to have a blood pressure check, as with the kiosk and pharmacy checks, was identified as an important factor in this evaluation. Members of the public had a sense of empowerment in being able to decide where and when to have a blood pressure check, and people reported feeling reassured by the check.

What is the opinion of staff who carry out blood pressure checks, and of key stakeholders on the implementation and delivery of the initiative?

Staff carrying out the blood pressure checks viewed the training they had received and implementation of the initiative positively. Staff carrying out the blood pressure checks were comfortable with the extension to their role, which across the strands increasingly involves a more holistic approach (for example, in giving lifestyle advice). Staff viewed the initiative as involving a manageable amount of extra work and job satisfaction, and confidence levels were felt to have improved.

Suggestions for improvement from the staff carrying out the checks included improving information systems, to allow reporting of blood pressure results to GPs and other health professionals where necessary, and to allow follow-up.

Do community blood pressure checks lead to changes in behaviour and lifestyle?

In this evaluation, several participants reported an improved awareness of what their blood pressure readings meant and that they either had been, or would go to their GP because of their community blood pressure check. There was also evidence of potential (and actual) lifestyle change amongst those who found they had high blood pressure readings, as well as among those whose readings were normal, with some members of the public viewing the check as a 'prompt' to action. Further, the Health Trainers reported that because of the blood pressure checks they had seen an increase in the number of referrals to their other services, such as weight management services and Stop Smoking services. However, whether engagement with and responses to the initiative has been equitable across socio-economic variables requires further consideration.

What are the key drivers that support successful multi-partnership working to ensure the success of the initiative?

The collaboration between stakeholders in different strands of the initiative was regarded as excellent, with very good support from Champs and good attendance at steering group meetings. Collaboration with Halton Borough Council, who ran the training, was also described as very effective.

Stakeholders identified that one of the important features of the training and the initiative in general was the application of a consistent approach across C&M. Staff in each strand attended identical training courses based on the Champs guidelines for blood pressure testing, delivered by the Health and Wellbeing team at Halton Borough Council. They were also given identical blood pressure monitors.

For the Local Pharmaceutical Committee and Merseyside FRS, the fact that the initiative was operated by an umbrella organisation such as Champs and therefore covered a whole region rather than selected local authorities or postcodes, made the initiative easier to implement and deliver.

Recommendations

Structural level recommendations

Who should act: Commissioners

- Ensure that IT systems are in place to record and report blood pressure measurements back to GPs and other relevant health professionals.
- For sustainability of the initiative, ensure that sufficient funding is in place for pharmacies.
- Ensure the initiative is part of broader multi-level approaches that aim to promote healthy lifestyles in order to improve equity and monitor the impact of the initiative across different socio-economic groups.
- Aim for further improvements in creating equitable access to opportunities to change lifestyle behaviours.

Organisational level recommendations

Who should act: Pharmacies

- Conduct wider discussions with pharmacy staff, to find out why some pharmacies did not complete the 25 blood pressure readings required of the initiative.

Who should act: Health Trainers

- Ensure that members of the public have enough privacy when they are having their blood pressure checked (by using screens where necessary, for example).

Who should act: FRS staff and wider stakeholders

- Ensure staff are clear about who they should target for blood pressure checks.
- Develop opportunities to promote and communicate the expanded remit and value of FRS's role in health and wellbeing to the public.

Who should act: Staff responsible for managing kiosks and wider stakeholders

- Ensure that health literature and signposting for advice is available close to where the kiosk is located.
- Check accuracy of machines in measuring blood pressure.

Who should act: Organisations providing training

- Provide more guidance on how to approach members of the public to offer a blood pressure check.
- Provide more guidance on entering blood pressure results onto computer systems and ensure that staff are confident in recording blood pressure results on relevant computer systems.
- Ensure it is clear if the training provider is also responsible for recruiting participants to the training course.
- Ensure that it is clear that the training does not qualify participants to train other staff to participate in the initiative.
- Provide regular staff update training.

Who should act: All organisations involved in the initiative

- Consider future communication and marketing of the initiative, for example ensuring that the reason for doing blood pressure testing is effectively communicated to different groups, accounting for cultural differences, and differences in age and gender.
- Provide feedback on the results of the initiative to all staff, so they can see the importance of what they are doing.

Recommendations for future research

- Carry out further evaluation of blood pressure testing as part of future evaluations of the overall FRS Safe and Well scheme.
- Develop evaluation methods that will more effectively reach those targeted by the FRS as part of the blood pressure initiative (i.e. with previously undiagnosed blood pressure).

About this evaluation

This work was conducted under the remit of the Champs Intelligence & Evidence Service and provides a qualitative evaluation of the Cheshire and Merseyside (C&M) *'High blood pressure detection through innovation'* initiative, (the *'initiative'*). This initiative is part of the wider *'Saving lives: Reducing the pressure'* scheme that has been implemented in order to tackle untreated hypertension in the region.

Researchers carried out interviews with members of the public who had had their blood pressure taken as part of the initiative, and with staff involved in delivering the initiative within their respective settings. Further interviews were carried out with key stakeholders.

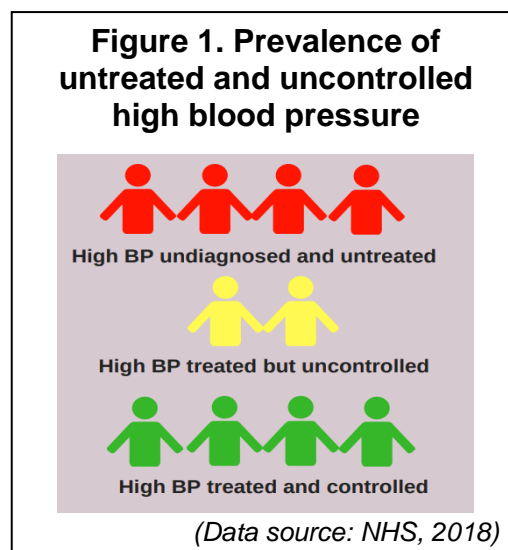
Aims and objectives

This evaluation sought to understand the following aspects of the initiative:

- Is hypertension detection outside of General Practice acceptable to the public?
- Are the public well informed about high blood pressure (including risk factors, complications, prevention and self-care), and do they know and understand their own 'numbers'?
- What is the opinion of staff who carry out blood pressure checks, and of key stakeholders on the implementation and delivery of the initiative?
- Can community blood pressure checks lead to changes in behaviour and lifestyle?
- What are the key drivers that support successful multi-partnership working to ensure the success of the projects?
- What are the key lessons that have been learnt (including the processes such as setting up the project, project management and partnership working) ?

Background

People with high blood pressure are up to three times more likely to develop heart disease or have a stroke (BHF, 2018b). High blood pressure is also a major risk factor for chronic kidney disease and dementia (PHE, 2018). In England, around 1 in 4 adults have high blood pressure (24%) and it is estimated that there are more than 5.5 million people with undiagnosed high blood pressure (BHF, 2018a; BHF, 2018b). For every ten people with high blood pressure, around four are undiagnosed and untreated (Figure 1) and a further two on treatment have not reduced their blood pressure enough to be controlled (NHS, 2018).



Around half of adults do not understand their blood pressure numbers or the risks associated with hypertension and few pro-actively have their blood pressure checked (Cordis Bright, 2018; Kibler et al., 2018; PHE, 2014). Most hypertension is detected by opportunistic testing in primary care, with some detected at hospital or workplace screening (Hamilton et al., 2003). Hamilton et al. (2003) point out that those who rarely use medical services, or are not at work, are less likely to have their blood pressure measured.

Based on national prevalence data, current local estimates suggest that in excess of 650,000 adults in C&M have high blood pressure. Of this number, more than 250,000 have high blood pressure, but do not know it, leaving them at ongoing risk of serious medical consequences as a result (National Cardiovascular Intelligence Network, 2017; PHE, 2017).

One in three people with diagnosed hypertension in England do not go on to achieve good blood pressure control, double the proportion of other countries such as Canada, where five out of six people with high blood pressure achieve good control (BHF, 2018a).

There have been recent improvements, with the prevalence of untreated hypertension in England falling between 2003 to 2015 for both sexes (from 20% to 15% among men and from 16% to 10% among women) (PHE, 2018). However, a substantial number of people remain at increased risk of cardiovascular disease. Poor health outcomes related to high blood pressure are worse for those who live in disadvantaged communities, who are 30% more likely to have high blood pressure than those from the least-deprived areas, and more likely to suffer ill health as a result (Champs, 2016).

National strategy

In March 2017, NHS England (NHSE) published the Next Steps on the NHS Five Year Forward View, which highlighted their commitment to the early detection and preventative action for people at high risk of cardiovascular disease (NHSE, 2017; PHE, 2018).

Public Health England (PHE) have recommended improving access to opportunistic testing in a range of medical, commercial and community settings, in order to increase the number of people diagnosed with hypertension and refer them to appropriate medical and behaviour change services (Cordis Bright, 2018; PHE, 2014). This would include more opportunistic testing in primary care and also in community pharmacies, which have been identified as potentially effective sites for reaching those who may not frequently attend general practice (Pharmacy Voice, 2017; PHE, 2018).

Treatment of hypertension should include person-centred lifestyle support, to help manage modifiable risk factors (Cordis Bright, 2018; PHE, 2014). Such health lifestyle improvement interventions have been found to be cost effective within five years and potentially cost-saving to health and social care within ten years (PHE, 2014).

Blood pressure interventions are thought to be cost saving. It is estimated that if England achieved a 15% increase in the proportion of adults who have had high blood pressure diagnosed, then over ten years, an estimated 7,000 quality adjusted life years could be saved, and £120m not spent on related health and social care costs (PHE, 2014).

NICE/SIGN guidelines

Each local authority area is required to have a blood pressure programme that is consistent with the NICE guidelines on hypertension diagnosis and management (NICE, 2011). These guidelines set out details including how blood pressure checks should be carried out, which lifestyle interventions to offer and referral signposting guidelines.

National British Heart Foundation projects

The British Heart Foundation (BHF) Blood Pressure Awards programme aims to facilitate the implementation of the NICE/SIGN guidelines on hypertension (Cordis Bright, 2018). The programme intends to identify effective models of engaging adults with blood pressure checks, and educating the public about the risks associated with hypertension and how it can be managed (Cordis Bright, 2018). The intention is to target areas of high social and health inequality. There are seven schemes funded in the BHF programme, including:

- A scheme in Bradford aims to deliver an enhanced blood pressure awareness and detection programme, with advice and checks delivered by a voluntary sector partner, Health Action Local Engagement.

- Haringey and Islington and their partners have commissioned five community based voluntary organisations to train staff to conduct opportunistic blood pressure checks in the community and alongside their existing services including a particular focus on reaching groups not regularly accessing primary health care services.
- In Lambeth, the CCG and its partners commission community pharmacies and opticians to conduct opportunistic blood pressure checks in their services. In addition, a local GP federation will conduct blood pressure checks in community settings.
- Leeds City Council and its partners work with six pharmacies, located in the most deprived 10% of areas in Leeds, to deliver opportunistic blood pressure checks in pharmacy settings. They also work with partners from Leeds Community Healthcare to deliver blood pressure checks in the workplace.
In Leeds and Lambeth, individuals identified as having high blood pressure are loaned a home blood pressure monitor, which will provide home monitoring to provide further blood pressure data to aid the diagnosis of hypertension.
- In Greenwich, an enhanced community awareness and detection programme involves using a mobile unit, delivering blood pressure checks, healthy lifestyle advice and support, and signposting on to existing healthy living services. The unit tours high footfall locations, workplaces and other targeted locations.
- In Scotland, three Health Boards have been involved in a scheme that focuses on promoting home blood pressure monitoring, supported by specially trained Telehealth Assistants.
- The initiative in C&M involves three strands of work to increase blood pressure awareness and checks in the community, via: Fire and Rescue Service Safe & Well visits; mobile health kiosks; and blood pressure checks in pharmacies and community settings.

(Cordis Bright, 2018)

There is a co-ordinated programme of evaluation of the BHF projects, which will aim to determine which of the models appear to work best to support improved awareness and detection of hypertension outside of traditional primary care settings. The evaluation will also consider which pathways are the most effective in reducing the burden on primary care (Cordis Bright, 2018).

‘Know your Numbers’ campaign

Since 2001, Blood Pressure UK has organised an annual ‘Know your Numbers’ blood pressure check event and awareness week (Blood Pressure UK, 2018). Each year across the UK, at hundreds of locations, free blood pressure checks are offered. Adults are encouraged to know their blood pressure numbers and take the necessary action to reach and maintain a healthy blood pressure.

'Know your Numbers' week 2018 took place between 10th to 16th September. A social media campaign was run across C&M during the week, which proved successful with 370,000 impressions obtained and a reach of 168,000 people, building on the success of previous years (Champs, 2018b). Many C&M areas used the Champs tool kit and digital assets to promote the week in their area. An evaluation of the 'Know your Numbers' scheme was undertaken in 2008 (Blood Pressure UK, 2008).

Local strategy

Saving Lives: Reducing the Pressure

The C&M Directors of Public Health and the C&M Blood Pressure Partnership Board, established in November 2015, agreed that a sub-regional system wide approach to tackling hypertension was a key priority (Champs, 2017). To inform the development of the strategy, C&M learnt from world leaders in Canada who developed the Pan-Canadian Framework for tackling hypertension (Hypertension Canada, 2015). In May 2016, the C&M five-year cross sector strategy to tackle hypertension '*Saving lives: Reducing the pressure*' was launched (Champs, 2016). The nationally and internationally recognised strategy sets out the vision, aims, objectives and high level action plan for *prevention, detection and management* of hypertension. It aims to relieve the pressure on health and social care services by empowering healthier lifestyles and self-care. Professor Norm Campbell from the University of Calgary in Canada, who led the Pan-Canadian Framework, has said that the C&M strategy '*provides a state of the art, comprehensive approach to hypertension and will serve as a model for other programmes around the globe*' (Champs, 2016).

One key aim of the C&M Blood Pressure Strategy is to develop innovative approaches to checks and treatment of new high blood pressure cases by working closely with key partners. Learning from members of the public, providers and existing intelligence is paramount to the success of the strategy. In order to help achieve this, funding was secured from the British Heart Foundation Blood Pressure Awards Programme (described under the previous heading).

C&M British Heart Foundation initiative

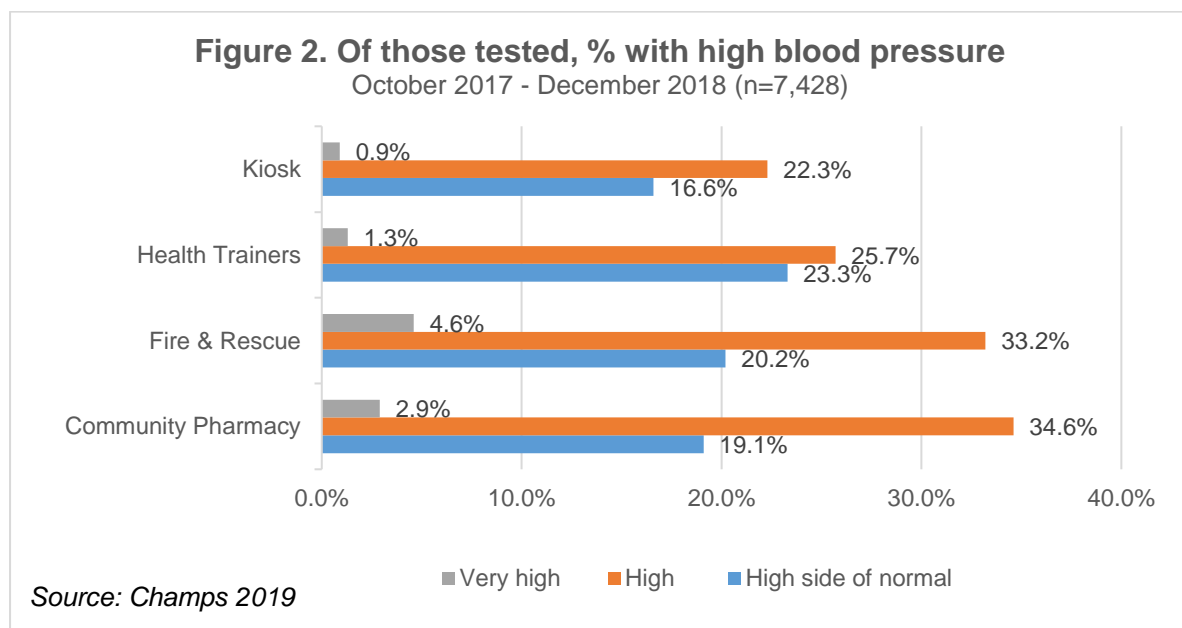
In March 2017, Champs and PHE and a number of system partners were successful in a joint bid for BHF to support innovative ways to detect hypertension in community settings. The award was for £100,000 over two years (£60,000 in Year 1, £40,000 match funded). Year 2 will deliver four blood pressure related projects that contribute to the delivery of the hypertension and Five Year Forward View (FYFV) action plan (NHSE, 2017). The four projects are:

1. Health Trainers in Halton will carry out blood pressure checks.
2. Healthy Living Pharmacies across C&M will carry out blood pressure checks.

3. Fire & Rescue Service Safe and Well (S&W) checks in Merseyside and selected locations in Cheshire will include blood pressure checks.
4. Warrington Digital Technologies portable digital health kiosk will include blood pressure readings and offer lifestyle advice.

The qualitative evaluation in this report forms a part of the wider evaluation of the initiative. A national evaluation of the BHF schemes is currently being undertaken by Cordis Bright, exploring effectiveness and delivery (Cordis Bright, 2018). They will analyse performance monitoring data collected by sites and carry out surveys and consultations with stakeholders and patients/users.

Early results from a quantitative evaluation of the C&M initiative indicate that from 1st October 2017 to 31st December 2018, 7,428 new case blood pressure checks were conducted in C&M under the BHF initiative, in community pharmacies, kiosks and by Health Trainers and FRS advocates. Of these, 18.8% had a high side of normal reading; 28.3% had high blood pressure; and 2.2% had very high blood pressure (Champs, personal correspondence) (see Appendix 1 for details of blood pressure readings for each level). In each setting, there have been large numbers of people with high blood pressure being detected, as shown in Figure 2.



Healthy Living Pharmacies

The Healthy Living Pharmacy Programme includes blood pressure interventions. Healthy Living Pharmacies (HLPs) were rolled out by NHS England across C&M, and by early 2018, more than 85% of the 633 pharmacies across the patch had become accredited HLPs (NHS England, 2019). HLPs are located in some of the most deprived areas, with the aim of helping to address health inequalities (Champs, 2017). Some HLPs already carry out blood pressure checks, however this is currently unfunded and there is no centralised data collection or collation of this data.

HLPs were invited to join the BHF initiative. Training commenced in December 2017, with 116 trained by December 2018. HLPs on the BHF initiative received equipment and staff training to be able to deliver blood pressure checks, discuss healthy living and signpost appropriately, and also eventually to make use of the conversational tool¹ (Cordis Bright, 2018). The aim is for the initiative to be non-pharmacist dependent, using champions who are staff members trained to do blood pressure checks and signposting.

The project steering group decided on a sample size of 3,000 blood pressure tests for the pharmacy strand of the BHF initiative pilot. With 120 pharmacies expected to be trained, this would require 25 tests to be carried out in each pharmacy. Therefore each of the pharmacies in the initiative were set a target of 25 blood pressure tests to be carried out on individuals who were not under the care of their GP for blood pressure monitoring. However, it was reported by one of the wider stakeholders that some of the pharmacies who were signed up to the initiative had not been able to reach their target of 25 blood pressure checks.

On attendance at the training session, the pharmacies were provided with a blood pressure machine but no payment was made for attending training. Pharmacies participating in the BHF initiative were paid a total of £75 on completion of 25 blood pressure checks. This payment was for the data collection associated with the blood pressure measurement and the recording of information on to PharmOutcomes (a community pharmacy data collection system)², which allows for evaluation of the project. Under a separate scheme, community pharmacies are concurrently in the process of being commissioned by NHS England to carry out blood pressure measurements and medicines management and this service includes a payment for the completion of the blood pressure measurements.

Health Trainers

Health Trainers³ carry out health checks in community settings. They also deliver a workplace health programme to a range of workplaces, and have a service level agreement to deliver NHS Health Checks within GP surgeries.

As part of the C&M BHF initiative, Halton Health Trainers have received equipment and training to deliver opportunistic blood pressure checks, lifestyle advice and signposting at community events, community centres, shopping centres and workplace venues in Halton. In future they will also use the conversational tool (Cordis Bright, 2018).

¹ *Conversational tool*: A digital tool designed to ease members of the public into a friendly conversation about their health before offering the opportunity to have a blood pressure check (Cordis Bright, 2018).

² [PharmOutcomes](#) is a web-based system which collates information on pharmacy services, allowing local and national level analysis. It records interventions such as flu vaccinations, minor ailments treatment and blood pressure monitoring.

³ Health trainers and Health Check Officers essentially carry out the same role. For consistency, the term 'health trainers' is used throughout this report.

Fire & Rescue Service Safe & Well Checks

Across Merseyside (and soon to start in Cheshire) the FRS are offering blood pressure checks and advice as part of the Safe & Well check within the Home Fire Safety Check. If householders are not already under the care of their doctor for their blood pressure, they are offered a blood pressure check. The BHF funding covers costs for the blood pressure monitoring equipment and for FRS staff training (Cordis Bright, 2018).

In Merseyside, the Safe & Well check is delivered by trained advocates. All 25 staff delivering the Safe & Well checks have been trained. It is estimated that Merseyside FRS will complete 10,000 home visits per year (Cordis Bright, 2018).

In Cheshire, blood pressure screening pilots have been completed in the communities served by Chester and Macclesfield fire stations. After a three month pilot, full roll out is expected to begin in 2019. The workforce to be involved in the project includes operational crews as well as advocates (Cordis Bright, 2018).

Warrington Digital Technologies: Wellpoint kiosks

Five of the nine local authorities in C&M have been involved in the development of digital technologies designed to promote knowledge and detection of blood pressure amongst the public (Champs, 2017). One of these is the development of a portable kiosk in Warrington, which provides blood pressure readings, lifestyle advice and signposting, as well as a general health check. In phase one of the initiative, the Wellpoint kiosk was based at a wide range of locations in and around Warrington, between 1st September 2017 and 31st March 2019. The locations included shopping centres, community centres and leisure centres, council offices and depots, as well as Warrington Hospital (see Appendix 2). The kiosk measures weight and body fat as well as blood pressure and heart rate. It asks a range of questions about lifestyle, including smoking, alcohol consumption and exercise. It also asks users how they found the experience of using the kiosk.

Phase two of the kiosk initiative, again funded by the British Heart Foundation and co-ordinated by Champs, started in 2019, focussing on workplaces. A number of kiosks are being deployed to large businesses across Warrington, St Helens and Halton. Alongside the kiosks, each workplace will train employees to become Blood Pressure Champions who are then able to take blood pressure as part of an ongoing workplace wellbeing initiative.

Training: the process

Halton Borough Council deliver training for the C&M BHF initiative. It is accredited as one part of the City and Guilds Health and Social Care Award Level 3: “Undertaking Physiological Measurements”. There is a practical assessment element to each test (Cordis Bright, 2018). Training consists of one half-day session, which begins with background information on how many people are estimated to have undiagnosed high blood pressure and the importance of having it checked. The main part of the session is focused on how to take a blood pressure reading. Each individual attending the training is observed taking a measurement and at the end of the session they are signed off as competent to measure blood pressure. As part of the session the C&M guidelines on blood pressure are discussed, along with how to make an onward referral, if necessary, and how to signpost to other relevant services. The course also covers data entry, tailored to meet different local authority requirements. Everyone attending the training receives a blood pressure monitor and the C&M guidelines.

Training is delivered on-site for the FRS staff and Health Trainers, and at booked community venues across C&M for pharmacy staff. Staff associated with the venues where the kiosk was based did not receive any training. Since the initiative began in September 2017, 271 C&M community partners have been trained to undertake blood pressure checks (Champs, 2018a). The stakeholders felt that delivery of such training at this pace and scale was reflective of an innovative cultural shift in C&M relating to high blood pressure detection. By January 2019, 19 training sessions had been delivered.

Methods

The evaluation was undertaken between June 2018 and March 2019. It included two main components, the collection of qualitative data and a review of the literature.

Qualitative data collection

We carried out semi-structured interviews with members of the public and staff carrying out the blood pressure checks, alongside at least two observation days in each of the four settings to gather qualitative data about the initiative. The interviews asked members of the public about the process of having their blood pressure taken, as well as any changes in behaviour that have resulted from the check, such as health seeking behaviour and lifestyle changes. Interviews were also carried out with wider stakeholders of the C&M BHF initiative.

Interviewees were members of the public who had had their blood pressure taken in either the pharmacy, by a health trainer, by FRS staff as part of a Safe & Well check, or at a kiosk. We aimed to interview a minimum of 10 participants in each of the four strands. Participants were given the option to take part in the interview at the time, or leave their contact details to be contacted by researchers at a later date. Participants were asked if they would like to be considered to take part in a further telephone interview, which would take place 2-3 months after their initial blood pressure check. We contacted those who had had a high blood pressure reading and those who said that they would seek further medical advice, along with two who had normal blood pressure readings, to ask about their experiences since the check. We asked participants if they had visited their GP, taken up any referrals or made any lifestyle changes. This information was then used to create six 'case studies', which were used to illustrate some of the themes that emerged. As two of the case studies were very similar, only five are presented in the report.

Figure 3 shows the different elements of qualitative data collected in the evaluation.

Literature review

A rapid literature review was carried out, commencing with a search of the NICE evidence base and then following up references from relevant articles. Initial search terms included "self-screening and blood pressure" and " 'self-screening' and hypertension". A further search used the following terms: " 'community screening' and blood pressure" and " 'non-physician screening' and blood pressure" (i.e. not just self-screening). Final terms included "screening and community and hypertension"; "non-physician screening and hypertension" and "workplace and hypertension and screening". Filters were applied to later searches to exclude articles that were not systematic reviews or published before 2010.

The literature review was used to inform the development of questions for the interview guides. It also informed the discussion of the findings of the evaluation.



Figure 3. Overview of the different elements of qualitative data collected in the evaluation of the C&M BHF initiative

Observations in the settings

Healthy Living Pharmacies

We carried out observation days and interviews at two pharmacies; one in Sefton and one in Wirral. At the time of the visits, 1-2 pharmacists and 2-3 assistants⁴ staffed each pharmacy. Each had a small private consultation room used for blood pressure screening, as well as for delivering interventions such as flu jabs. There was an in-house printed A4 sign in the window and in the consultation room, advertising the blood pressure checks (Figure 4). Pharmacy staff usually approached members of the public and asked if they would like a blood pressure check, although some members of the public would occasionally ask for one.

During the observation periods, we were unable to count the numbers of people being offered and taking up blood pressure checks, as the pharmacies were very busy. However, we observed that the majority of people coming into the pharmacy during these periods were offered a check. We interviewed 12 members of the public across the two pharmacies, four of whom were men and eight of whom were women.

The pharmacies had previously only offered blood pressure checks to those under the care of their doctor for high blood pressure, or for those who requested a check. Since joining the BHF initiative, as far as possible, checks have been offered to all members of the public. In the Sefton pharmacy, only the pharmacist had participated in the training, while in the Wirral pharmacy, two pharmacy assistants had completed the training and carried out the blood pressure checks. Pharmacy staff had also completed training on how to use the 'Conversational tool'.

The C&M Guidelines for Blood Pressure Testing (Appendix 1) were used to determine next steps after a blood pressure reading was taken. Each person having their blood pressure taken in the pharmacy was given a small 'z-card' leaflet⁵, on which their individual score was recorded. The leaflet explained what the numbers meant and included suggestions for lifestyle changes to prevent or reduce high blood pressure. Advice from the pharmacy staff was tailored to the needs of the individual,



Figure 4. Advertisement on pharmacy shop front

⁴ The term 'assistants' was used in Wirral and 'dispensers' in Sefton. For consistency, the term 'assistant' has been used throughout this report.

⁵ Z card leaflet: <http://psnc.org.uk/liverpool-lpc/wp-content/uploads/sites/117/2017/12/Cheshire-and-Merseyside-BP-Zcard-.pdf>

depending on their blood pressure result. Those with normal blood pressure would be advised to read the leaflet. For those with higher readings, pharmacy staff would also enter into a discussion with the customer about healthy eating and activity. Customers were encouraged to keep the z-card leaflet in their wallet and bring it back with them if they have their blood pressure re-checked.

For those being tested as part of the C&M BHF initiative (i.e. not previously under the care of their GP for high blood pressure), results, including what the blood pressure reading was and any referral advice was entered on to 'PharmOutcomes'.

Health Trainers

Researchers observed health checks being carried out by Health Trainers⁶ at three different venues during 'Know your Numbers' week. We conducted a total of 13 interviews with members of the public who had had their blood pressure taken by the Health Trainers. Of these, ten were women and three were men. The two researchers who were present on the observation days approached as many people as capacity allowed to ask if they would like to take part in an interview, until they reached their quota of participants. Most people who were approached agreed to take part, although a minority declined as they were too busy. We later carried out telephone interviews with five Health Trainers who had been involved in delivering the checks, and with a Health Improvement Specialist, all based within Halton.

Runcorn Shopping City

Two Health Trainers carried out the checks in 'Main Square' within the shopping centre. The checks were carried out next to a seating area and screening was used around the area where the checks were being carried out (Figure 5). The Health Trainers could only approach people in the seating area to ask if they would like to have a blood pressure check, but not those who were inside shops. The Health Trainers were busy for most of the morning, including a 20-minute spell around lunchtime when people were queuing up in the seated waiting area to get a blood pressure check. They carried out 35 blood pressure checks over the course of the observation period, eight of whom were men and 27 of whom were women. We interviewed seven of these people.

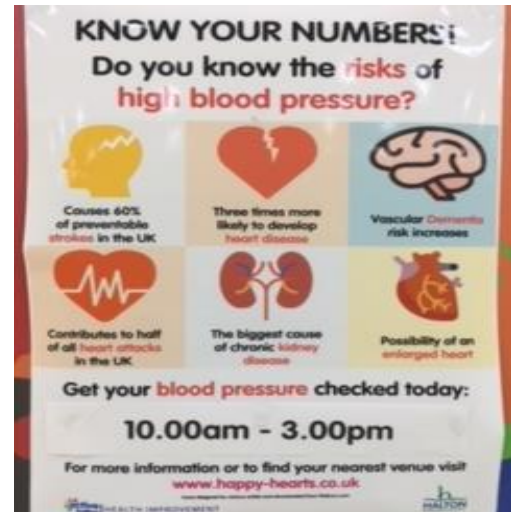


⁶ Checks were carried out by Health Trainers, or by Health Check Officers, which is essentially the same role

Halton Stadium Café, Widnes

People having their blood pressure taken included staff who were based in the building, as well as anyone else who was using the café, which might include people using the gym based at the stadium. One health trainer carried out the checks at a table in the corner of the café. He would approach people using the café to ask if they would like their blood pressure tested. On the observation day, the café was relatively quiet, but the researchers were told that there were often events on in the stadium, such as table tennis sessions for members of the public, which were held several days per week, when the Health Trainer was very busy carrying out blood pressure checks. The Health Trainer carried out four blood pressure checks during the observation period, all women; of whom one was interviewed by researchers.

Figure 6. Advertisement for Health Trainer blood pressure checks



Municipal Council Building, Widnes

People having their blood pressure checked were council staff based within the building who had been invited via email by their workplace. Two Health Trainers carried out the checks in a room off a corridor connecting the main entrance and café to other parts of the council building (Figure 7). Over the three-hour observation period, there was a reasonably steady stream of people coming for a check. Health Trainers carried out 21 blood pressure checks during the observation period; seven of whom were men and 14 were women. Five were interviewed by researchers.

Health Trainers used the C&M Guidelines for Blood Pressure checks to determine next steps after a blood pressure reading (Appendix 1). Following a blood pressure check, the Health

Figure 7. Blood pressure checks at Municipal Building



Trainers gave all participants a 'Do you know your numbers' leaflet on which their blood pressure numbers were recorded. The leaflet is similar to the z-card used by the pharmacists and FRS, giving information about blood pressure and lifestyle advice on areas including diet, exercise, use of salt, and managing stress. People with a high blood pressure reading would be encouraged to enter into a discussion

about lifestyle. Health Trainers could refer to programmes including Fresh Start, a weight loss programme lasting for six months⁷, as well as other in-house programmes including ‘Stop Smoking’ services. They could also signpost to a range of other organisations, from support with housing to local parent and child groups. If time allowed and the opportunity seemed right, as a preventive measure, Health Trainers would also discuss lifestyle issues with those whose blood pressure was within normal limits. Health trainers took the contact details (phone numbers) of people who required repeat tests. The Health Trainers followed up in one month’s

time to discuss steps taken since they had received their reading.

For Health Trainers carrying out blood pressure checks in community settings, the findings would usually be recorded on PharmOutcomes. This system can be accessed by a wide range of health professionals, including GPs and pharmacists, although this interface

Figure 8. FRS Safe & Well form

Blood Pressure Screening		YES		NO	
<input type="checkbox"/> Declined to discuss	<input type="checkbox"/> N/A				
Are you under the care of your Primary Care Team (GP, Nurses) for your blood pressure? (if 'YES', no further action required)		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Would you like us to check your blood pressure today to show how simple it is?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Blood Pressure taken?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Outcome - use relevant code: 1 2 3 4 5 6 7		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Smoking Cessation		YES		NO	
<input type="checkbox"/> Declined to discuss	<input type="checkbox"/> N/A				
Following discussion around the benefits of stopping smoking, would you like MFRS to provide information / referral to your local stop smoking service?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alcohol Reduction		YES		NO	
<input type="checkbox"/> Declined to discuss	<input type="checkbox"/> N/A				
Following discussion around the benefits of reducing your alcohol intake, would you like MFRS to provide information / referral to your local stop smoking service?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

between professionals is still being improved further.

When Health Trainers were offering checks in the workplace, an email was usually sent out in advance to let employees know that they were taking place. In all locations, Health Trainers displayed large signs advertising the checks. Health Trainers also reported that the checks were sometimes advertised on a sandwich board when they were taking place in the community. People often approached the Health Trainers; the majority of participants said that they were just walking past, or saw the signs, and decided to have a check. Health Trainers said that they did also approach potential clients at events, to ask if they would like a check, where time allowed.

Fire & Rescue Service Safe & Well Checks

We carried out observation days within three of the four communities covered by Merseyside FRS Stations that have prevention teams; Belle Vale, Prescot and Wallasey. As part of the Safe & Well section of the Home Fire Safety Check, any householder not already under care of a GP for their blood pressure is offered a

⁷ <https://hit.activehalton.co.uk/project/fresh-start-halton-free-weight-loss-programme/>

blood pressure check (Figure 8). The process followed C&M Guidelines for Blood Pressure testing to determine next steps (Appendix 1). If the blood pressure reading was in the normal range then brief advice around lifestyle was given and a Z-card booklet provided.

We observed a total of 15 Safe & Well visits, resulting in six Safe & Well checks being carried out. Five people, all women, had their blood pressure taken as part of the Safe & Well check. All had normal blood pressure and were given a Z-card. Blood pressure testing was not offered to the other person who had the Safe & Well check, because they were already having their blood pressure monitored by their GP. We carried out two interviews with householders 'on the spot' during the three observation days, followed by two telephone interviews at a later date, as there was not time to carry them out on the day. Interviews were also conducted with the former service lead for Safe & Well, and with five advocates who had been involved in delivering the FRS blood pressure checks.

Warrington Digital Technologies: Wellpoint Kiosks

The Wellpoint Kiosk was based at a wide range of locations in and around Warrington, between 1st September 2017 and 31st March 2019. The kiosk measures weight and body fat as well as blood pressure and heart rate, and asks a range of lifestyle questions (Figure 9).

Researchers carried out observations of people using the kiosk between November 2018 and January 2019 at three locations. These were Warrington Borough Council's 'The Gateway', New Town House and Orford Jubilee Neighbourhood Hub. People using the kiosk received health advice on a screen, which was based on the C&M Guidelines for Blood Pressure testing. Kiosk users could have their results emailed to them and were also given an option of having them printed out. The printout or email also provided brief lifestyle advice tailored to the results of each individual, as well as suggestions for referral to support services, or to their GP where appropriate. Health literature about blood pressure was available close to the machines at one of the settings that researchers visited (New Town House).



The Gateway

The Gateway is a Resource Centre that is owned by Warrington Borough Council, and houses several charities and council workers. The kiosk was based in a large communal area through reception, at the side of a large room. As with each kiosk, there was a notice saying 'Wellpoint Health Kiosk: I am free to use, please use me'. There was a screen above the kiosk but this was blank on the observation day and there were no accompanying information leaflets. Six people used the kiosk during

the three-hour observation period; of which three were men and three were women. Four of these people were interviewed by researchers.

New Town House

New Town House is a large facility that houses a wide variety of council staff. The kiosk was based in an area slightly away from one of the entrances to the building, next to the lifts and near where workers clock in and out. There was some information on the screen high up above the kiosk, but some of the writing was too small to read from that distance. A selection of leaflets on blood pressure were also placed near to the machine for people to take. Four people used the kiosk during the four-hour observation period, all of whom were women; three of these people were interviewed by researchers.

Orford Jubilee Neighbourhood Hub

Orford Jubilee Neighbourhood Hub offers a number of leisure facilities, including two swimming pools and offers a range of classes. It houses a library as well as a wide range of community groups and organisations. The kiosk was situated in a large open area. The information screen above the kiosk was switched on and as in the Gateway, there were no accompanying information leaflets. Nine people used the kiosk during the four-hour observation period, five of whom were women and four of whom were men. Only three of these people were interviewed by researchers, as we had reached the quota of participants required for this strand of the project.

Findings

Facilitators and advantages of the initiative

Increasing opportunities to get checked

Most of the members of the public who we interviewed had no awareness of whether their blood pressure would be too high before their test and were not aware of what the blood pressure readings meant. Among participants, the majority of kiosk users and just under half of those tested by pharmacy staff and Health Trainers, had not had their blood pressure taken for a year or more.

“You do meet a lot of people who’ve never been to the doctors and haven’t got a clue what their BP is like, so this is just a starting point for them to have an idea what numbers mean and what BP means.” (FRS advocate)

Several people said that they would not want to ‘trouble’ the doctor by asking for their blood pressure to be checked, and felt that the community blood pressure checks were a good way to save GP or primary care time. Some interviewees said that they would not go to their GP unless they were actually feeling unwell. Staff delivering the initiative recognised that the checks were reaching members of public who did not routinely access primary care services.

“No – I don’t tend to try and go to the GP surgery. One because I don’t have a lot of time, and you can do this in work’s time, and two I don’t want to mither the GPs.” (Female, aged 25-34 years, Gateway Warrington, Kiosk user)

“[Reaching] those patients that maybe don’t access services. We’re on the high street, so they can get to us... I think we have improved how we access those patients, because whereas we wouldn’t necessarily have seen them as patients before, just coming in to buy cough medicine or paracetamol, or maybe buying shampoo. Those patients now, we’re asking them ‘do you know what your [blood pressure] is?’ Whereas before, we probably would have just sold them the paracetamol and off they’d have went.” (Pharmacy staff)

Even among members of the public who had had their blood pressure taken within the last year, there was often uncertainty what their blood pressure reading might be, or how their blood pressure reading would compare to the rest of the population of their age. Of the participants identified with high blood pressure, several had not had their blood pressure checked within the last year and some were not aware that it might be too high. One participant with high blood pressure said it was years since they had had it checked. The staff we interviewed reported that they had encountered many more cases like this.

“When we do them in workplaces, we’re getting so many people that aren’t going to their GP. Particularly [men] of working age... loads of people hadn’t been to their GP in like 10 years. I think something like 50% of them had raised [blood pressure] on that day and got referred. and when it’s right there, in front of you in a workplace, then people do come.” (Health Trainer, Halton)

Of the members of the public who had had a blood pressure check more recently, some had used a machine at their GP surgery, or had been tested previously at the pharmacy or kiosk. Whilst others had visited their GP for a health complaint (such as asthma or diabetes) and had their blood pressure taken at the same time.

There were no objections among members of the public to being personally approached to have a blood pressure check. In the pharmacies, it was thought to be much more effective than just having a sign in the window. One pharmacy customer commented that although they had seen the sign, they would not have liked to “bother” the pharmacy staff and would not have engaged with the initiative if they had not been asked. The kiosk was placed across a wide range of venues, and staff responsible for its implementation felt that it was attracting people who would not otherwise visit their GP.

“So the driving instructors for example would never take time out ...to do this, they’d never take time out to go to the chemist to get it done. They were sitting in that reception whilst at work – and once one had got it done, they’d all have a go – but they never would have gone anywhere else.” (Public Health Team, Warrington Borough Council)

However, kiosk users we interviewed often appeared to be focussed on their weight, rather than on their blood pressure. Stakeholders also felt that people who used the kiosk often did so because they wanted to check their weight, rather than their blood pressure. One noted that the way the kiosk information is presented tends to emphasise the weight aspect of the test:

“What they’re taking away is normally focussed on their weight not on their blood pressure, that’s my concern about the whole thing. I think it’s the way it’s presented on the screen in front of you... So when you say how’s your blood pressure, they couldn’t recall what their blood pressure was, because they’re too busy focusing on their weight.” (Public Health Team, Warrington Borough Council)

An inclusive initiative

As the initiative was used by a wide range of people, including those who would not normally visit their GP, staff and stakeholders perceived the initiative to be ‘inclusive’. GPs agreed that community screening and self-screening would help to identify members of traditionally ‘hard to reach’ groups who had high blood pressure. This included people who would not normally visit their GP for long periods, many of whom were men. Staff felt that the “*more gadgety*” nature of the kiosk might be

particularly appealing to men. Stakeholders also felt that the workplace health element was an important part of the role of the kiosk.

“I suppose that’s the thing, the uptake in the workplace, and it being very much part and parcel of a healthy workforce approach... particularly in places like Warrington where you’ve got quite a vibrant economy, and quite a lot of big companies, big employers. What would be great is if lots of companies took us up.” (Public Health Team, Warrington Borough Council)

The initiative had also started to make blood pressure checks offered by the Health Trainers more inclusive. Members of the public need to be aged 40-74 years to qualify for an NHS health check, but the initiative meant that blood pressure checks were open to a wider range of ages.

“I’m also the [NHS] health check lead, and one of the things that I’d noticed was that they were turning away people who were perhaps too young to have a health check, or perhaps were ineligible for health check for other reasons... but we had no other way of sending people elsewhere.” (Public Health Consultant, Halton)

Convenient and familiar setting

Compared to the GP surgery, the settings in the initiative were viewed by users as easier to access. The settings were places near where people worked or visited frequently, and using them did not involve making an appointment or taking time off work. Many members of the public said that they liked having their blood pressure taken in a familiar setting. Most of the community settings were seen as less stressful than the doctor’s surgery and this helped to avoid ‘white coat syndrome’, where going to a medical setting may cause stress and result in a higher blood pressure reading.

“You can go at any time whereas at the doctors you have to book an appointment and go and sit in a room full of sick people while you’re waiting.” (Male, aged 35-44 years, Orford Neighbourhood Hub, Kiosk user)

“I suffer from a little bit of anxiety and panic attacks, so I’ve found coming here a bit more settling than going to the doctors, because obviously at the doctors there are loads of people around, whereas here it’s just calm and quiet, so I think it might help people like that.” (Female, aged 18-24 years, Wirral pharmacy customer)

There were other comments indicating how the personal attributes of staff were important in making people feel at ease and encouraging them to take part. The pharmacy was viewed as an ideal place for discussions around blood pressure and health advice in general, because of the ability to access medical information relating to individual customers. A pharmacy customer felt that as they already knew the pharmacy staff, this helped them to feel comfortable about having a blood pressure check done.

“It’s more personable, and you don’t have to make an appointment and we know the staff... so there’s kind of a relationship.” (Female, aged 45-54 years, Wirral pharmacy customer)

Several FRS staff said that many householders they see have mobility problems, and that many are not able to leave the house, so having a check done at home is ideal for them. FRS staff also felt that householders were more likely to be relaxed having their check done in the familiar environment of their own home. This was also echoed by FRS householders.

“I think it’s always better if you’re doing something in a person’s setting where they’re very much more comfortable than somewhere else. They may be comfortable somewhere else too, but I guess it’s just easier in someone’s own home.” (FRS advocate)

The convenience of the checks also made it easier to reach members of the public who may not otherwise seek medical help. Many of those interviewed said that they would not otherwise have gone to their GP surgery, or elsewhere, to have their blood pressure checked. This included those subsequently identified with high blood pressure or slightly high blood pressure.

Two members of the public who had had their blood pressure checked by the Health Trainers expressed views that were counter to the themes of convenience and familiarity. They felt that their blood pressure might be higher than usual in the setting they accessed; one participant said that they were shopping and had to remember what they needed to buy, and another because they were in their workplace with work colleagues around; expressing that they felt more stressed than they would outside of work.

Empowerment

Members of the public across all strands of the initiative felt empowered by being able to decide when and how often to check their blood pressure. Health Trainers also mentioned that they had potentially had more time to talk to members of the public and to explain what their readings were, and what this meant, than a doctor would normally have. Members of the public also endorsed this perception.

“That’s the first time that someone’s actually told me what my blood pressure actually is. I think the only time they tell you in the doctors is when it’s high. I have been borderline high in the past, but I’ve never ever had any medication for it, and I’ve managed to bring it down. That’s the first time someone’s actually said to me, that’s what it is...”
(FRS householder)

["Do you feel more aware of your numbers now?"]... “Yes, well she’s wrote it down now, so next time I’ll be able to compare it won’t I – I’ll keep hold of that”
(Male, aged 55-64 years, Sefton pharmacy customer)

However, one participant reported that they did not want to understand the numbers as they would rather leave it to the pharmacist.

“Better to leave it to the pharmacist! The more you think, the more you have high blood pressure!” (Female, aged 35-44, Sefton pharmacy customer)

Linked to empowerment, many interviewees felt reassured after the check. In the majority of cases, people felt reassured that their blood pressure was within normal limits, with those who had been referred or advised to see their GP feeling content that they were taking the right steps in order to manage their blood pressure. Those who had previously had high blood pressure were often reassured to find out it was normal after testing at the pharmacy.

Several kiosk users also felt that having their blood pressure taken by the machine was preferable to having it taken by a health professional as there was no-one to ‘judge’ their behaviour or their results. Kiosk users were happy that they did not have to share the information that they got from the kiosk unless they chose to. They could choose to have it emailed to them rather than printed out, which was felt to be more discreet. The staff we interviewed also felt that using the kiosk meant that members of the public can decide for themselves how, and if, to act on the information that they receive from the kiosk, such as their weight or blood pressure.

“... You’re not really ashamed, cos if it says ‘you’re too fat’, it’s just a machine, whereas if it’s a person in your face, you think ‘oh now they now know that I eat too much chocolate.” (Male, aged 35-44 years, Orford Neighbourhood Hub, Kiosk user)

“There’s something about the amount of privacy it offers the person using it that’s very attractive. If we go out as a health improvement team offering blood pressure [checks], and people know they’re going to get some advice around changing their lifestyle, about healthy eating, and not everybody is confident enough or wants that face-to-face interaction. With the kiosk they have any opportunity to read the information without anyone else being there, that’s quite a big pull.” (Public Health Team, Warrington Borough Council)

The GPs we interviewed also felt that the checks could increase patients’ confidence in, and allow them to take responsibility for, monitoring their own blood pressure and reporting back to the GP where necessary.

“Well I think it should increase patient competence to be honest. If pharmacists and others are showing people what to do – if they’re buying a blood pressure machine themselves and things are explained properly then it should improve competence.” (GP)

Pharmacy staff noted that regular customers would often ask for repeat checks, with one commenting that this was particularly the case for female customers. Almost all participants across the four strands of the initiative said that they were likely to come back for another blood pressure check. This again illustrated how the public felt that the checks were convenient to access. One exception was an individual who said

that they would not need to come back as they already had a monitor at home. Health Trainers said some members of the public had told them that they had bought their own blood pressure monitor following the check, in order to allow them to continue to self-monitor their blood pressure.

Feelings about privacy

In the pharmacies, all participants liked the privacy of the separate space for the checks. Similarly, participants whose blood pressure was checked by a Health Trainer at the Shopping City (where screens were used around the area where people were having their blood pressure checked) generally did not express any concerns about privacy.

However, a minority of participants at the Municipal Building did say that they would have liked more privacy. Here, the checks by the Health Trainers had taken place in an open room off a busy corridor. Conversely, a participant at Shopping City did note that carrying out the checks in more open areas made it more accessible for people with limited mobility, such as people who were in a wheelchair.

Sometimes Health Trainers would have to put the blood pressure cuff on over clothing, in order to maintain privacy when doing the checks in public places such as the shopping centres. This was mostly not a problem, but there were occasions when a reading could not be obtained this way.

People who had their blood pressure checked at the kiosk felt that it was sufficiently private. The kiosk was often located in a corner, and even when it was in more open areas, people felt that those who were around would not disturb them whilst they were using it.

“I don’t think it needs to be closed away or anything, you can do it in your own space and people just leave you to it.” (Female, aged 25-34 years, Gateway, Warrington, Kiosk user)

Case Study: Healthy Living Pharmacy

Brenda aged 60 years from Sefton. Discovered her blood pressure was high after a visit to the pharmacy.

Brenda is a 60 year old woman from Sefton, Merseyside. She recently retired from a busy full-time job with the council and now works part-time two mornings a week. She lives with her husband who is currently quite dependent on her after a problem with his hip operation has left him temporarily with no hip. When collecting her husband's prescription, she heard the pharmacist offer a check to the customer in front of her, so thought "*I'll have mine done*", as she had been feeling quite stressed lately.

The blood pressure check

Brenda was pleased to be shown into a private room and felt very relaxed during the BP check. She felt that the personal attributes of the pharmacist were important – she has come to know her pharmacist well over the years and has always found her helpful, warm and friendly. She was surprised to find her blood pressure was raised.

"I didn't feel maybe quite as stressed as I might have done if I'd gone to the doctors"

Would she have gone elsewhere?

Brenda thought it is unlikely she would have gone elsewhere for a blood pressure check. She had thought about going to the GP for a health check, but she does not drive and her husband is currently unable to drive. Her GP surgery is half an hour's walk away. There is a bus service, but this is not very reliable. The pharmacy, on the other hand, is '*on the doorstep*'.

Consequences of the visit

The pharmacy blood pressure check has prompted Brenda to think of going to the GP for a full health check;

"With the [blood pressure] being a bit high, I might just get my heart checked – I might just go to the doctors and get a complete check."

Case Study: FRS Safe and Well

Sheila aged 62 years from Knowsley. Reassured after normal blood pressure result during FRS Safe and Well visit.

Sheila received an FRS S&W visit after having recently been discharged home from hospital following an operation. She had wanted her smoke alarms checked, but was happy to have a health check too.

The setting

Sheila would not have otherwise have gone to her GP for a blood pressure check and thought the home-based check was a *“brilliant, fabulous idea..... especially for anyone who can't get out, i.e. me, on my own”*. She felt very relaxed, *“at ease”*, having the check at home:

“You're more hyped aren't you if you're going (out) to get it done... I think it's well better in the house like that.”

Reassurance

Sheila had her blood pressure checked in hospital and the reading was normal. However, she had been concerned that her blood pressure reading might be too high after the stress of the operation, so she was happy to be reassured by a home based check offered by the FRS:

“I'm made up that I've had it done again, - I think it was brilliant the way it was done for me in the house.”

Compatibility of the initiative with usual practice

Well prepared for delivery following training

The staff that were interviewed as part of this evaluation were happy with the training and felt well prepared to carry out the blood pressure checks with members of the public. They felt confident because they had information with them about what action to take based on each blood pressure reading, what advice they should give and if they should make any referrals.

“I think it’s a lot better when you’ve got the information in front of you. I think if you didn’t have the information there on the z-card and you’re trying to remember each thing, or I think the fact that you’ve got some like literature alongside you to say. It just makes you feel a bit more confident.” (FRS advocate)

Overall, participants were happy with course content. The training was seen as focused on the actual mechanics of testing, which staff felt comfortable with. However, it was suggested that additional detail would be beneficial on how to deliver lifestyle advice and on how to enter blood pressure results onto computer systems. Our evaluation identified that currently some staff (notably pharmacy assistants) may be put off carrying out the blood pressure checks because of uncertainties over how to enter data onto the ‘PharmOutcomes’ system.

Another suggestion from pharmacy and FRS staff was for advice on techniques on how to engage members of the public, although some FRS staff said that this was not a problem if they had already built a rapport with the householder during the visit. Staff who carried out the blood pressure checks also felt that there was not much guidance available on the advice that could be given to people who have low blood pressure.

Most of the staff interviewed thought that half a day’s training was sufficient, but there was a comment that for pharmacy assistants new to blood pressure checks, it might have been too much to take in.

“I’d already been doing BP for many years before. I’m not sure about people who’d never done BPs before. There was a lot to take in, a lot of figures. I’ve been doing it for many years, so it made more sense.” (Pharmacy staff)

Setting specific issue – Healthy Living Pharmacies

Involvement of pharmacy assistants in the training, and subsequently the delivery of the initiative, was not uniform across the pharmacies we visited. In one pharmacy, only the pharmacist had received training whereas in others, the pharmacy assistants had attended. In general, it was felt that there should be more encouragement for pharmacy assistants to attend the training.

“If you’re looking at the skill mix within the pharmacy, it’s shifting it in the wrong direction if it’s just the pharmacists that go.” (Wider stakeholder, LPC)

A further issue was identified in that those trained to carry out the blood pressure checks were often employed part-time. To address this issue, it was suggested that more staff receive the training.

There were some difficulties in getting staff from the pharmacies that had signed up for the training to actually attend. This was identified as being partly due to the wide geographical spread of the pharmacies across C&M. A discrepancy had also arisen in that the trainers had not been aware that they had a role in actively recruiting participants and in addition to delivering the training. The involvement of the Local Pharmaceutical Committee (LPC) in encouraging attendance was considered very important. They included features in their newsletter and made individual approaches to some pharmacies by email or telephone.

A stakeholder disclosed that although some pharmacies had sent staff on training, they had carried out few or even no blood pressure checks; the reason for which needs to be reviewed. We did not explore the reason for this in our evaluation and they may require follow up.

Welcome extension to their role

From the perspective of the Health Trainers, delivering blood pressure checks as part of the initiative was viewed as *“business as usual”*.

“It’s fairly standard for us to be able to go and do that – so in terms of setting up a service, that’s not what we did, but we just adopted within what we’re already doing. So we’ve got [blood pressures] that we collect from our exercise referral programme, we’ve got [blood pressures] from our weight management programme, we’ve got [blood pressures] that we’ve got from going out into checks in terms of community events... It was an add on to us, and it was more just using the [blood pressures] that we take, and making sure that they were uploaded and used.” (Health Improvement Specialist, Halton)

For the pharmacies and the FRS, carrying out the blood pressure checks for the initiative were viewed as a distinct add on to their usual work. However, pharmacy staff were comfortable about giving lifestyle advice, partly because they have

previous experience of doing this as part of other health campaigns (e.g. for weight loss and alcohol consumption). One of the pharmacy assistants was also a Community Health Champion. Pharmacy staff reported that the checks did not take up too much of their time and were also happy to be involved in the project. One commented that they found it very rewarding:

“The best part of our day is when we’re in the consultation room with patients, so I’m happy with that... ideally, you want to be in there with patients, giving them advice, because that’s really what our role is.” (Pharmacy staff)

However, pharmacy staff reported that there may not always be time to offer the blood pressure checks. This happened when they were busy dispensing, if the consultation room was already in use, and if the pharmacy was too busy to be able to ask each customer if they would like a check. Funding was also identified as an issue for pharmacies going forward. Pharmacy staff regarded the re-imbursment of £75 (for recording blood pressure readings for 25 people) during the initiative as relatively small.

“For pharmacy, because this is a completely new area of work, funding is going to have to be found from somewhere to pay for the pharmacists to do the extra activities. There’s always going to be a challenge with the sustainability within [the pharmacy setting]... Particularly in an environment where we continue to face Public Health cuts.” (Public Health Consultant, Halton)

“Ideally, pharmacies would be getting commissioned to do it and paid as a fee to do it because it’s another job for us.” (Pharmacy staff)

FRS staff were used to giving fire safety advice and (viewed in relation to their wider role in delivering Safe and Well visits) welcomed the extension and transition to a more holistic approach that involved giving lifestyle advice. FRS staff expressed that they were comfortable asking and answering questions from the public. FRS advocates described the blood pressure element of the FRS S&W check as less invasive and easier to talk about than the other elements of the check, which include questions about bowel cancer, smoking and alcohol consumption.

“I think it’s really great because we’ve never had anything like that before, it’s something we can offer these vulnerable people, and obviously people before thought the fire service was about going out to fight fires, and it’s changed people’s mind set and the way they think of us. So it’s not all about fighting fires, it’s all about prevention, and preventing before things happen, and looking after people.” (FRS advocate)

However, one advocate delivering the checks did report that a small minority of householders felt that the blood pressure checks should not be the role of FRS staff. Two advocates also mentioned that it might be a problem within the wider context of the Safe & Well check if householders perceived that there were too many health questions.

“In a small minority of cases, if there are too many health questions, this can be a problem. Some people may find this too intrusive and maybe worry that they’re being assessed with a view to moving to a nursing home.” (FRS advocate)

The stakeholders we interviewed about the kiosks felt that staff in the different venues, where the kiosk has been based, now felt more comfortable talking about lifestyle risks if approached by kiosk users. Previously, they thought this had to be left to health professionals. Staff in the kiosk venues felt well supported overall. They reported that support from the company that manages the machines had been very good and when they were installed at a new location, the company ensured that staff at each venue knew how to use them.

“I would say that the customer services from Wellpoint, who are the company providing the kiosk, have been absolutely excellent, so the engineers who deliver it will spend a lot of time with who they are delivering it to, letting them know how to use it, letting them know if there’s any glitches how to solve them, or who to phone up to and do that. So as well as the work that we’ve done, it’s been emphasised by the person who’s delivered the kiosk as well.” (Public Health Team, Warrington Borough Council)

Easy to implement

Wider stakeholders, such as the former Merseyside FRS S&W lead, felt that one of the advantages of the initiative was that it was for residents across the whole of the C&M area. As such, the initiative was inclusive and easy to implement, especially when compared with other initiatives that only accept referrals for people who live in certain postcodes. Although pharmacy, FRS staff and Health Trainers did not offer checks under the initiative to people who had already been diagnosed with high blood pressure and were under the care of the GP for this, nobody was excluded based on where they lived within C&M.

“The key benefit for me is, because this is operating over a C&M area, as a Merseyside FRS we clearly cover a Merseyside county boundary, so to include things in our visit that isn’t isolated to a postcode or an area or a group of people, it’s open to everybody. The difficulty is when we work with partners who say we’re just working in this part of Liverpool or that part of Sefton, or we just want to focus on this age group.” (Mersey FRS)

However, both the Health Trainers and FRS had encountered delivery issues in relation to targeting the initiative towards members of the public with previously undiagnosed high blood pressure. In practice, although the Health Trainers had attempted to target venues and groups where they felt that they were more likely to find people who were previously undiagnosed, the checks also attracted people with previously high blood pressure who wanted to continue having their blood pressure monitored. FRS staff identified a need for more clarity about who should have a blood pressure check. Advocates were initially carrying out the checks for everyone,

including those who were already being monitored for high blood pressure by their GP.

“Maybe the training needs to emphasise that the aim of the project is to target people who are previously undiagnosed and ensure advocates have a clear understanding of who to offer the test to, so they all operate in the same way.” (FRS advocate)

Using equipment and materials to support delivery

FRS stakeholders and the advocates we interviewed felt that being able to use a clear protocol and supporting materials, which was the same for all the householders that they visited, increased advocates' confidence in delivery.

“The staff know that wherever they go, whoever they're seeing, the follow on advice, the material, it's all the same, so that makes it really easy for us to do.” (Mersey FRS)

One FRS advocate noted that they did not take the blood pressure monitor into the house with them, returning to their vehicle to fetch the equipment if required. They felt householders might be put off if staff have too much equipment with them, as they already carry equipment required for the fire safety aspect of the visit.

Early effects

Awareness raising

Staff involved across the strands of the initiative felt that the blood pressure checks increased people's awareness of the importance of maintaining a healthy blood pressure. The GPs we interviewed felt that the initiative was likely to lead to increased public awareness of the importance of maintaining a healthy lifestyle, in order to have blood pressure that was within normal limits. They felt that making minor lifestyle changes could have a significant impact on patient health.

"They're just raising awareness that blood pressure's important... certainly locally there are a high number of people locally who have strokes and heart problems, and so on. It's just trying to get the message out there, that just minor change, it could be just minor changes to their lifestyle, could mean that they could live longer." (GP)

GPs raised the possibility that the blood pressure checks might be a way of engaging with the public to raise awareness of the importance of patients taking control of their own health.

"I think the whole purpose really is public awareness and public engagement. I think we start with, why is blood pressure important. I think once people understand blood pressure's important, then actually I might want to know what my number is, because that might allow me to make a lifestyle change or choice which might improve it." (GP)

One GP said that the patients that he saw were more concerned about reducing cholesterol than reducing blood pressure, therefore an initiative to raise awareness of the importance of maintaining normal blood pressure is important.

Seeking medical help

Several interviewees reported that they either had been, or would go to their GP as a result of their community blood pressure check. In addition to recommending that people see their GP because they had high blood pressure, Health Trainers felt that they might have encouraged people to see their GP if they had other concerns about their health. For one woman, the identification of high blood pressure through the pharmacy check had prompted her to consider going to her doctor for a full health check.

"I went to a workplace, [doing blood pressure checks] in a workplace, and I went back 2 months after, and I had loads of people coming up to me and saying 'I went to the doctor, and they've put me on medication now'. So I do think it does work, but I imagine one or two might slip through." (Health Trainer, Halton)

"It could be seen to be a way of easing them in to going to see their GP and questions from that that I couldn't answer, say like more clinical questions... Maybe it gives them a reason to go. So it might be

a good way to break down the barriers they put up themselves.”
(Health Trainer, Halton)

Staff carrying out the checks felt that men may be less likely to accept the offer of a check and that if they were tested, they might be more reluctant to seek medical help after a high blood pressure reading. They suggested that more support needs to be put in place.

“I think men are more likely, if they have a high result, to be kind of like ‘no it’s ok’. There’s been a few incidents where that’s happened where they’re like ‘no it doesn’t matter I’m fine’ when we’re saying they should go and see their GP.” (Health Trainer, Halton)

Lifestyle changes – ‘planting a seed’

The initiative involved giving tailored lifestyle advice to each individual, depending on their blood pressure result. Many interviewees reported they were either thinking about making lifestyle changes, or had already carried out these changes. Among members of the public interviewed on the day of their blood pressure check, the majority thought they would make some changes, such as using less salt, or increasing/ restarting exercise routines. Several people said the advice received helped to reinforce these changes. Staff carrying out the blood pressure checks noted that at least some people would be prompted to think about making changes.

“We definitely do see people making behaviour changes... Even if you can just plant the seed and get them thinking about making behaviour changes, then it’s a little bit better than it was before... if they’re like, ‘I should probably stop smoking’, then we can do that referral. We can signpost to other services too.” (Health Trainer, Halton)

However, some members of the public we interviewed stated that they had encountered barriers to carrying out the recommended amount of exercise, and were having difficulties balancing exercise with other commitments such as work and caring responsibilities. When asked about barriers to healthy diet and exercise, one female council office worker responded:

“Just time. Busy households, I think that’s what most people would say. Trying to fit – actually just trying to put it higher up the priority list, especially as a woman, there’s that many other demands.” (Female aged 55-64, Municipal Building. Blood pressure taken by Health Trainer)

The likelihood of making lifestyle changes because of the blood pressure check was perceived by staff carrying out the checks to vary by age and sex. Whilst older people were thought to be more likely to engage with the pharmacy checks, older people were seen as more resistant to change. As an example, one man aged over 85 years that we interviewed found he had slightly high blood pressure for the first time after a check in the pharmacy, but was reluctant to commit to making lifestyle changes.

“Salt is the best thing that’s ever happened as far as I’m concerned, I love it... I always have plenty of salt on my food, and I’ve had it for 60 years. I can’t see me changing my diet. We might cut down the odd bit of supper if we think we’re getting too fat.” (Male, aged 85+, Wirral Pharmacy customer)

Health Trainers reported that they were seeing an increase in the number of referrals to their other services (e.g. weight management and Stop Smoking services), because of the blood pressure checks. They had also started to monitor the blood pressure of people who were already using these services.

As a direct result of the popularity of the kiosk when it was stationed at a community centre in Warrington, a scheme of community health walks were organised in the local area from February 2019.

Wider impacts

As well as identifying people with high blood pressure, the C&M BHF initiative has also picked up people who have an abnormal pulse, which was outside the original scope of the initiative.

“I know in Halton of two cases where even though the people had come forward for a blood pressure check, an abnormal pulse was detected. And one of them ended up having a defibrillator, and both of them were put on medication for their condition. And that was kind of left of field, because we weren’t necessarily looking for that.” (PH Consultant, Halton)

The FRS reported that some members of staff had been diagnosed with high blood pressure during delivery of the initiative. They were advocates, who, unlike firefighters, do not receive regular workplace blood pressure checks. They first became aware that their blood pressure was high whilst taking each other’s blood pressures during the training, and subsequently went to see their GPs and were diagnosed with high blood pressure.

“I think the added value is the increased awareness of our own staff as well, so our staff are really aware of blood pressure, so they can look after themselves as well as each other, so we have staff checking each other’s blood pressure. We’ve had 2 members of staff identified as in the FRS, who wouldn’t normally be getting medicals because they’re not in operational posts...” (Mersey FRS)

Case Study: Health Trainers

Dave aged 48 years from Halton. Discovered his blood pressure was high after a Health Trainer check at his workplace.

Dave is a 48 year old man who lives in Widnes and works at the council offices. He received an email invitation to a workplace blood pressure check by the Health Trainers.

The convenience of the check being offered in his workplace was an important factor in his decision to have his blood pressure checked and he would not have had his blood pressure checked elsewhere. His blood pressure reading was high. He returned the next day to have it re-checked and it was still high. He was given verbal lifestyle advice and leaflets by the Health Trainers, referred to Fresh Start lifestyle services and advised to see his GP.

Early effects of the check

Dave was interviewed on the day of his re-test. He said he previously had no idea what the numbers making up a blood pressure reading meant. He said he is now much more aware of this and of the risk factors that can cause high blood pressure.

A follow-up phone call three months later revealed that as a result of his blood pressure check, Dave had been to see his GP and been prescribed anti-hypertensives (high blood pressure medication).

Dave had not taken up the referral to Fresh Start, but he had changed his lifestyle by doing more exercise and walking more, and had made dietary changes (such as eating healthier food and using less salt). His wife had joined him in these new routines.

Dave felt he did not need extra help or advice. He viewed the information he had been given by the Health Trainers and the GP as sufficient, and had also sought information on the Internet. Dave said if not for the Health Trainer check at his workplace, none of this would have happened. He is full of praise for the service and suggested it should be regularly available.

Case Study: Kiosk User 1

Peter aged between 58 from Warrington. Used the kiosk to check his blood pressure.

Peter works at The Gateway where he had used the kiosk on three occasions. He was diagnosed with high blood pressure several years ago, and takes medication for this.

Peter has used the kiosk to monitor his blood pressure (and other measures) on an ongoing basis. He also monitors his blood pressure at home. He was diagnosed with pre-diabetes about a year ago and this prompted him to make lifestyle changes that led to him losing weight and consequently his blood pressure decreased.

Peter has his blood pressure checked by his GP every six months, but found using the kiosk very convenient, and particularly liked not having to wait for an appointment, which he would have to do if he went to see his GP;

“I’ve got this (appointment) coming up (for a pre-diabetes check). I had to book it about 2 weeks ago, and it’s not for another 2 weeks. I know they’re busy.”

The blood pressure check

Peter had used the kiosk immediately before and after a holiday, to see if his blood pressure and weight had changed whilst he had been away, as he had been eating less healthily than usual. His blood pressure was slightly high, and he was advised to see a doctor. When his blood pressure was re-checked it was within normal limits.

Early effects of the check

Peter reported that using the kiosk allowed him to monitor his blood pressure and the impact of lifestyle changes he had made. This motivated him to make further changes such as increasing his exercise levels. When his blood pressure readings were normal, it provided him with reassurance. He also found it useful that the readings were saved, so he could look at them on his computer and see any changes;

“Certainly every 6 months, got that one week on the same machine; all these machines, scales and things like that tend to be different don’t they... and the beauty of it is, it saves it. I’ve got it on the computer. So to do it every 6, 12 months, just see what difference it’s made, it’s a good idea. not have to go to the doctor.”

Case Study: Kiosk User 2

Norman aged 42 years from Warrington. Had a high blood pressure reading at a community centre kiosk.

Norman is a 42 year old driving instructor from Warrington. The kiosk was situated in the community centre in Orford that also houses the driving test centre. He was waiting for one of his pupils who was taking a driving test and had noticed the kiosk, but was not sure if it was for general use or just for certain community groups. A member of staff in the community centre informed him that he could use it. He would not have otherwise have gone to have his blood pressure checked at his GP or elsewhere. The kiosk showed that his blood pressure reading was high, so he had it re-checked at a later date at the kiosk and it was still high.

Early effect of the check

As a direct result of his high blood pressure reading, Norman decided to follow the lifestyle advice from the kiosk and has encouraged his family to do the same. He visited his GP and his blood pressure was normal, however he and his family have maintained their lifestyle changes.

Interviewer: *“even though you know now [your blood pressure] was normal?”*

Norman: *“Yes, and I do feel better doing more active things as well so it has made me change my way of thinking. More exercise and better diet – not ridiculous changes, but better.”*

Advantages over GP visit:

Norman felt that as well as being more convenient, it was also less embarrassing to have his blood pressure checked by the kiosk than by his GP.

“[I] can get it anytime and you’re not really ashamed, cos if it says ‘you’re too fat’, it’s just a machine. Whereas if it’s a person in your face, you think ‘oh now they now know that I eat too much chocolate’ or whatever. Whereas if it’s a machine, you can just go do it yourself and you don’t feel as embarrassed.”

Setting-specific Issues

Norman raised several issues relating to the kiosk. He felt that there could be clearer signs inviting people to use the kiosk. He also felt that the lack of immediate support could be a problem stating that *“if someone gets that worried and they can’t get to the doctor for 2 weeks, they’ll panic more and it could get higher. [They could need somebody] who knows what it should be, how to get it down, if it’s a problem.”*

He also identified that it was a missed opportunity to raise awareness about what the numbers on the blood reading mean as there were no leaflets or print-out information about the measurement.

System-level factors

Communication with primary care

Although it was normally the responsibility of the member of the public to make an appointment with their GP if their blood pressure was high or very high, pharmacists and health trainers carrying out community checks would also record blood pressure on PharmOutcomes. There were also occasions when FRS, pharmacy staff or Health Trainers would help facilitate the member of the public with seeing a doctor, or making an appointment to see a doctor. In the pharmacies, for those more vulnerable and perhaps unable to organise making a GP appointment themselves, the pharmacist could either contact their next of kin, or obtain the customer's consent and ring the GP to make an appointment for them. FRS staff reported that they may do the same, as part of their safeguarding role. In this respect, the checks increased communication with primary care.

“From a FRS point of view, we do see people who are extremely vulnerable, who are isolated; with our safeguarding hat on, if we feel that someone's unable to do that, we will offer to make a call on their behalf, to a family member or to their doctor's surgery, if they want us to.” (Mersey FRS).

Impact on primary care

The GPs who were interviewed were asked what, if any, impact the community checks would have on their workload. One GP thought that there was a possibility that identifying more people with high blood pressure through community checks, and potentially advising them to visit their GP, could increase workload. Although patients may be having their blood pressure checked in the community, any action that might be needed following a community health check remained the responsibility of the GP. The checks might put increased pressure on primary care because patients may have checks that they don't necessarily need, for example, patients who are already being treated for high blood pressure may then make an extra, potentially unnecessary, visit to their GP as a result.

“I'm expecting an increase... I haven't seen it yet, but the anticipation is that it will increase workload, because people will get a result, and the safe default option if it isn't within a normal boundary is to go to your GP. But I haven't seen that yet.” (GP).

One GP emphasised the importance of having strong inclusion and exclusion criteria for the community checks, in order to minimise any potential increase on primary care workload. They felt that the staff carrying out the blood pressure checks, such as health trainers and pharmacists, need to be really clear that they are just targeting those who are not currently being monitored by their GP for high blood pressure. In addition, as discussed later in the report, it is important for findings to be reported back to the GP;

“The only concern from a primary care perspective is that other people do health checks, it would be the GP ultimately who would take responsibility for any actions required as a result of a health check.” (GP)

When blood pressure checks are done in the community by professionals such as Health Trainers, the number of blood pressure checks that need to be taken at the GP surgery could reduce. One of the GPs also suggested that when patients are identified as having high blood pressure and treated accordingly, this could lead to a reduction in GP workload in the longer term.

“It could increase workload for primary care if you are identifying more – but then the spin-off for that is that if people are seen, identified and treated, it may take a little bit of time but it actually reduces the workload for primary care...” (GP)

However, any impact of the blood pressure checks on GP or primary care workload would vary between areas, and the level of deprivation in each area might have an impact on this.

“I think it depends on your demographic. Our population tends to be more of the worried well, but I would imagine in areas where there’s more deprivation, it might capture more people that may then trigger a process of lifestyle changing conversations.” (GP)

One GP felt that it was too early to tell if the community blood pressure checks would increase GP workload; the initiative would need to be piloted, in order to find out what impact it would have.

“Practice is changing all the time isn’t it? We will have to change our practice to adapt to it. I think the fear is that like acute kidney injury that it would significantly increase GP workload, but in practice it hasn’t done that... So it’s getting evidence to prove to GP colleagues whichever way – having a small pilot, getting feedback from these pilots to show what the impact is in reality, rather than the unknown, because the fear is the unknown isn’t it.” (GP)

Impact on QOF screening targets

Although it was potentially too early to judge the impact on QOF screening targets⁸, GPs thought that the community checks could potentially help practices to meet targets. Although one GP was concerned that a patient may have a community check, but then if they were on a QOF register might also be called to the GP surgery to have a check done, which would lead to duplication of work. This GP felt that this issue could be alleviated through development of better IT systems;

⁸ The Quality and Outcomes Framework (QOF) is a voluntary annual reward and incentive programme for all GP surgeries in England, detailing practice achievement results, resourcing and then rewarding good practice <https://qof.digital.nhs.uk/>

“People that are known to have hypertension might go along to have a check done somewhere else which is fine, but we will still call them for a check anyway.. What would be useful is if there was better sharing of information and data, so ...if someone has a check done on a validated machine, then.. that’s a valid recording, that meets the QOF requirements.” (GP)

However, a number of different factors, again, would influence the impact on meeting targets, including the way in which each GP practice currently managed blood pressure.

“We’re not a very good example as we’re quite pro-active in making sure we get people in to get their blood pressures done, we make it as easy as physically possible for them, they don’t need an appointment. But I think people who don’t have that, anyone else that’s doing blood pressure checks that can feed in to make sure they’re hitting the QOF targets is going to be a bonus.” (GP)

Service development

Development of a Merseyside-wide pathway that could be used to manage high blood pressure was seen as a positive result of the initiative.

“The other big positive that’s come out of this project from my perspective is that we’ve got the BP pathway, which we didn’t have before... We use it across the C&M patch, and if it hadn’t been because of this there would have been lots of different ones we’d have used.” (Public Health Consultant, Halton)

In addition, the initiative has started to raise awareness that people who are concerned about their blood pressure can go to the pharmacy and not just their GP. It has also increased dialogue between professionals about blood pressure management, as well as knowledge about, and interest in, hypertension.

“Previously the issue wasn’t given the prominence that it needs. Now the CCG is actually considering hypertension as one of its key areas of quality improvement... It does feel like the project itself has upped the local knowledge, and I’m talking about professional knowledge and interest in it as a subject, and that means that hopefully it’s acting as a catalyst for further work in that area.” (Public Health Consultant, Halton)

Partnership working

Stakeholders and staff from all strands of the initiative felt that excellent partnership working between a wide range of different agencies had been one of the key drivers to successful implementation of the initiative.

“There have been a lot of like-minded people who are very enthusiastic and driven.” (Public Health Consultant, Halton)

Stakeholders from the FRS also felt that the support that they received from Champs had helped to drive the project forwards;

“The communication, the support, particularly from (name) in the Champs Network, has been superb. They’ve supported us every step of the way. They’ve been to our launch events, they’ve supported us with advertising material, and that two way communication has been really good, making us feel part of what they’re doing, and vice versa we’re supporting them in their priorities... We feel part of the project, rather than being remote from it.” (Mersey FRS).

Trainers from Halton Borough Council (HBC), who have been involved in training staff from pharmacies, the FRS advocates, and the health trainers, also felt that good partnership working had been key to successful implementation of the initiative. They felt that there had been regular communication between key partners, and steering groups had been well attended;

“As part of the partnership, we’ve been part of the wider steering group that have managed this project... Yes working in partnership has been key to this really, we wouldn’t have been able to do this on our silo... The steering group has been well attended. And off the back of Wave 1 we’ve made a bid for Wave 2, and we’ve been successful so that’s off the back of what’s gone off on Wave 1 and what’s gone on and the strength of the steering group.” (Course Trainer, Halton Borough Council)

A member of the Local Pharmaceutical Committee (LPC) noted that partnership working on the steering group had been very successful, with members of the steering group feeling part of a good team. Collaboration between the LPC and HBC who ran the training was very effective. The feedback from HBC allowed the LPC to be able to target the pharmacies to encourage training uptake. An LPC member also reported that there was effective joint working and synergies between the different strands of the BHF project, with people identified as having high blood pressure by health trainers or FRS being referred on to pharmacies for a further check.

Potential barriers and suggestions for improvement

Accuracy

FRS and pharmacy staff did not report any concerns about accuracy with the blood pressure monitoring equipment. The machines in pharmacies, and those used by Health Trainers and FRS staff are calibrated at least every two years, and the kiosk is regularly calibrated, including every time it is moved between locations.

Kiosk users overall generally appeared to view the readings given by the machines as accurate, as did the staff. Staff also reported that support from the company that manages the machines had been very good. For example, when the kiosk was installed at a new location, the company ensured that staff at each venue knew how to use them. However, a small minority of interviewees who used the kiosk were concerned about accuracy. One interviewee said that he had visited his GP following a high reading, and that the reading at the GP surgery was 30 mmols lower, leading him to believe that the original reading on the kiosk had not been accurate. This interviewee also thought that having to stand to have their blood pressure taken at the kiosk might have contributed to this higher reading. The cuff position around the lower forearm, rather than the usual upper arm, may also have an effect on the accuracy of the reading.

Kiosk support

Lack of information and staff help was a barrier for some people in some kiosk locations. Stakeholders reported that whilst most people were able to use the kiosk without help, a minority would need support to use it. Although in some centres there were staff available who were trained in how to use the kiosk, this was not consistently the case. Staff in the venues hosting the kiosk felt that some users who had just found out that they had high blood pressure might benefit from reassurance or extra advice on next steps.

In two of the three kiosks locations observed by the researchers, there were also no information leaflets provided alongside the kiosk. There was only brief information about sources of lifestyle advice available on the printout.

Staff who were responsible for implementation of the kiosk were keen for it to continue, with the kiosk having regular time slots in each venue so that people would know when it was going to be available.

Potentially excluded groups

Staff carrying out the blood pressure checks commented that they did not have the equipment to carry out blood pressure checks on people with large arms, as this would require a specialist large cuff. Furthermore, the kiosk and screened off areas used by health trainers may be difficult for some people to access such as those with disabilities or mobility issues, e.g. wheelchair users. Due to the amount of written information on the screen, it was also thought that the kiosk was not suitable for people with learning disabilities, or people with sight problems. Other suggestions for groups who might have difficulties using the kiosk included those who would find it

difficult to stand for several minutes to use the machine, those who need extra support, such as people with dementia or with mental health problems, and people who require extra support when using technology.

IT and communication

The GPs interviewed for this evaluation suggested that further refinement of IT systems might be necessary, in order for results to be fed back effectively to them. One GP said that if patients were asked to inform their GP about their blood pressure results, there may be a proportion of people who would not do this. They felt that GPs needed to know about their patients' blood pressure results to enable them to follow up where necessary, avoid them having to 'chase up' patients for a check if they had already had a community check with a normal result, and help them to meet targets (such as those on the QOF) that require them to monitor certain patients' blood pressure.

"The only difficulty really seems to be feeding that back to GPs. Because if you've got someone who's got raised blood pressure, you need further investigations. It's the ones who are normotensive as well, because we're constantly trying to chase patients who haven't had a blood pressure done recently or have never had a blood pressure. And if they've had it done at the pharmacists and it's perfectly normal, I'd like to know that so that I don't need to keep chasing them." (GP).

Pharmacy and FRS staff also commented that they often have no way of knowing whether the individual has taken their advice and visited their GP about their blood pressure. Health Trainers carrying out the blood pressure checks would offer to take the phone numbers of all those requiring repeat tests, and to follow up in one month's time to discuss steps taken since their high reading. However, this was not always accepted by those having their blood pressure taken.

"The problem that we have at the minute is that we don't have that follow up, so we can say did you go to the doctors, what have you done since... Maybe that's something we can start doing more of, to see whether it has made a beneficial change to somebody." (FRS advocate).

"If it's really high, I will offer a follow up call, or say is it OK if I give you a ring and just check everything's gone OK with your GP, and take their contact info. But to be honest, a lot of people say no, they'd rather do it themselves." (Health Trainer, Halton).

For the kiosks, there is no follow-up information. Centrally collected data will only show how many kiosk users had high readings with advice given.

Setting specific issue – Healthy Living Pharmacies

Some pharmacy staff reported a lack of confidence in inputting results onto the relevant computer systems, which deterred them from offering the blood pressure checks. One pharmacist felt that monitoring those already on blood pressure medication was also an important service that they offered and should also be properly recorded.

Other locations

Interviewees were asked for ideas of other potential community locations for carrying out blood pressure checks. Suggestions included supermarkets, gyms, dental surgeries, car parks, large workplaces, community centres, council one-stop shops, large sporting or other events, libraries, museums, art galleries, Children's Centres and fast food outlets. One suggested that regular day and times for checks would be a good idea, for example, the first Monday of each month in large workplaces or shopping centres.

"I think more workplaces, because of people being at work. If we're actually there in the workplace, there's no reason why they can't have it done. But I think Monday morning in a busy shopping centre is a really good idea, to try and capture people. You're getting all different age groups." (Female, aged 45-54 years, Municipal Building. Blood pressure taken by Health Trainer)

"Gyms – before people start exercising, because if their [blood pressure] is sky high and they don't know, maybe they shouldn't actually start. We just tend to go anywhere with heavy footfall to be honest." (Health Trainer, Halton)

Staff felt that a good balance had been reached between making sure that the kiosk was going to locations where there was a high footfall of people, compared to locations where there was more potential to pick up people who wouldn't otherwise get their blood pressure checked, but perhaps footfall, and usage of the machine was lower. Usage in gyms and community centres tended to be high, whilst footfall and usage tended to be lower in libraries.

"It depends if you're thinking about numbers going through as in actual numbers of people... I think it balances out when you've got some of the places like the Livewire gyms for example - I think they had higher numbers of people using it, but they are in the gym because they are already thinking of and looking after their health – it's already in their consciousness that they are wanting to be more healthy and look after themselves and their wellbeing. So I think we have to have that balance between places where we might not necessarily get those huge numbers, but it's the quality of the interactions with people and the engagements we're getting with people who wouldn't necessarily do it anywhere else...a lot of them had high blood pressure." (Public Health Team, Warrington Borough Council)

Whilst staff were generally happy that the kiosk had been to a wide range of different places, there were some places that it could not go to, as there was insufficient security to monitor it.

“I think we’ve done quite well with the coverage. Unfortunately we had identified the main shopping centre Golden Square and the Bus Station as good location but neither was possible. It was around the security of it, both location are open until very late with people were passing and there wasn’t enough security to keep it safe, at late hours...” (Public Health Team, Warrington Borough Council)

GPs suggested a range of other venues where they felt that the checks might work well. Again, convenience for members of the public, and offering checks in places that people were likely to visit anyway, was key.

“I think it’s where people frequent. So people have tried putting a machine up with a booth in primary care waiting rooms. I think anywhere, supermarkets, post office, train stations, bus stations...” (GP)

More publicity

Regarding the pharmacy checks, several members of staff and members of the public who were interviewed thought the service should be advertised more widely, including in GP surgeries, and that the publicity could be more hard-hitting. However, it was noted that pharmacies were not expected to advertise widely during the pilot.

Those participating in Health Trainer checks at Shopping City also suggested that the blood pressure events could have been advertised more widely. At the Municipal Building, staff had received an email to give them the times and dates of sessions. One participant felt that the email could have been more detailed, informing participants what would happen and what they would have to do, and that blood pressure could be taken in a private setting if necessary, in order to alleviate any anxieties that people might have about the process.

Increasing frequency of events

Several participants, including those who had their check at Shopping City and Municipal Building, suggested that events such as the one they were attending should be held more often, at regular times. Many kiosk users also commented that they would like to be able to get checked more regularly.

Wider range of tests

A couple of interviewees suggested that pharmacies and Health Trainers could offer other tests, such as blood sugar testing, weight checks or flu jabs, alongside the blood pressure checks, in order to make the check more appealing and encourage more people to take part. However, it was recognised that adding additional elements would mean that the length of the check would need to be increased, which would be less convenient and make it more difficult to slot into the working day, and might necessitate using an appointment system.

Sustainability issues and next steps

Healthy Living Pharmacies

Stakeholders noted that, provided it can be funded, there is an opportunity to embed the role of community pharmacy in identification of high blood pressure across C&M. Those pharmacies coming to the end of the initiative's wave 1 pilot will be able to continue providing blood pressure checks under the new NHS scheme. Under this scheme, it is intended that people with high blood pressure at their first set of readings will come back to the pharmacy for further checks, rather than being referred onto their GP. It is expected that this will reduce the number of referrals for people who are not then subsequently diagnosed with high blood pressure. Where a referral takes place, there will also be a follow-up telephone call between the GP and pharmacy to understand what action has resulted from their referral. In addition, there will be an expansion to include people already under treatment who have uncontrolled blood pressure, with the aim of optimising their medication.

It is expected that a further 120 HLPs will be recruited to join wave 2 of the initiative. There will be no difference in delivery from wave 1, except that there will be a slight shift in emphasis, to involve very small businesses in the area with engaging with members of the public. For example if a pharmacy is in a row of shops, people within that row of shops will be invited to come to the pharmacy to get their blood pressure checked.

Wellpoint kiosk

Going forward, there are also plans for the kiosk to continue to link into other public health initiatives. For example, if someone went to their GP following a high blood pressure reading on the kiosk, they might be considered for another project, which involves home blood pressure monitoring.

"We've got another project, which is a home BP monitoring project. This arguably would be a pre event. So if someone goes to the kiosk, they've got high BP, they go to see their GP, they're given a home BP monitor. We have encouraged and facilitated the providers of the home BP monitor and the providers of the kiosk, we've put them together, and hoping that they between them could come up with some way of improving that link. Identification through to treatment." (Public Health Team, Warrington Borough Council).

"You can see it as a piece of the jigsaw. It's never going to be the silver bullet that will fix everything. This is what we want...these unobtrusive, user friendly parts of the pathway." (Public Health Team, Warrington Borough Council)

Several kiosk users identified that they would have liked the kiosk to be at the place where they had previously used it, or for it to be there on a permanent basis.

“I work in the building. It would be good to have it here more often actually, because I think it’s every year. I think it’s about this time, maybe every few months or something would be good.” (Female, aged 45-54 years, Gateway Warrington. Kiosk user).

Conversational tool

The conversational tool is an iPad app that is being introduced as an aid to blood pressure checks by Health Trainers and in pharmacies. The tool is currently undergoing further piloting.

The tool was covered in the training and one pharmacist remarked that it was a good checklist, and ensured that they covered “*all angles*” in their discussions with members of the public. However, although two pharmacy assistants had completed the tool training (‘Happy Heart’), they were not actually using it. The staff thought that using it in practice might be difficult, as it would mean an extra iPad would need to be available in the pharmacy consultation room.

Health Trainers had piloted the tool at an event during September 2018 and felt that the tool worked better when they, as well as the members of the public, were not too busy and had the time to engage. They reported that some people were happy to use the app by themselves, whilst others needed help.

“I think [the conversational tool is] more for trying to convince people to get their blood pressure taken, whereas we had people coming that wanted their blood pressure taken.” (Health Trainer, Halton).

Wider issues

Following a diagnosis of high blood pressure, and a visit with their GP, the next step is to help patients lower their blood pressure. Whilst this may be very straightforward for many patients, it may be more difficult for others to achieve. One of the GPs we interviewed felt that potential barriers to this could include patients not taking medication, as well as possible side effects arising from the medication.

The GPs we interviewed also thought that the initiative could be incorporated into wider attempts to improve health such as creating ‘healthy villages’ within CCG localities. This was related to broader initiatives aimed at supporting lifestyle changes, such as implementing cycling routes and offering opportunities to take part in health walks (such as at Orford Community Hub). One GP felt that linking public health initiatives like this to a well-known charity such as the BHF gave it more credibility.

“What we’re looking at doing is how to create a healthy village. It’s having bike routes, having green space, having local fruit and veg shops, it’s promoting spaces where people can walk and move. And I think when it’s allied to a charity like the British Heart Foundation, which is a respected charity, I think it carries a bit of weight.” (GP)

One of the aims of community blood pressure checks is to raise awareness among the public of the importance of monitoring blood pressure and maintaining a healthy lifestyle. One of the GPs felt that the need to do this may decrease over time as people become more aware of these issues;

“Looking to the future it’s for people to take care of themselves rather than using community resources, maybe things will change in the future, but at the moment yes, most people need guidance.” (GP)

One GP also felt that, traditionally, people in the UK may have been less willing to find out more about their health, including their blood pressure, than people in other countries. They also felt that people in more deprived areas might traditionally have been less inclined to focus on their health, often having other priorities. However, they felt that this was starting to change.

“I think parts of Merseyside we feel disadvantaged, so in the past people did feel well ‘what’s the point’. But times are changing and people are starting to take more care of themselves. So I think there’s a possibility now that people will take advantage of all this work, so that they can enjoy life for longer, and things don’t have to be boring.” (GP)

Discussion

Literature on the evidence for community-based blood pressure screening has so far been limited (Fleming et al., 2015). However, this qualitative evaluation would suggest that the initiative works well in that community detection of high blood pressure is acceptable to the public. Further, our evaluation would suggest that there are benefits to increasing public understanding of the risks of high blood pressure, with no significant, unintended issues identified.

What understanding have we gained?

Is high blood pressure detection outside of general practice acceptable to the public and able to reach those previously 'hard to reach'?

This evaluation found that offering blood pressure checks outside of general practice is acceptable to the public across each strand of the project. The members of the public that we interviewed in general expressed that they were happy with the blood pressure check that they had, and said that they would be happy to return to have it done at the same venues again.

Among members of the public, we identified that important features of the initiative were its convenience, ease of access and the preference for a familiar, non-medical setting. Convenience and ease of use has been recognised in the literature as a common theme in community blood pressure screening (Hamilton et al., 2003; Lomas and McLuskey, 2005; Rickerby and Woodward, 2003). In this evaluation, many of those interviewed said that they would not otherwise have gone to their GP to have their blood pressure checked. Important facilitating factors for the community checks were that there was no need to make an appointment or take time off work, and that it was nearer to where they lived or worked.

Our evaluation also identified that the initiative was able to reach members of the public who stated they would not want to 'trouble the doctor' for a blood pressure check. Community screening is often seen by those taking part as helping to avoid wasting the doctor's time (Rickerby and Woodward, 2003; Tompson et al., 2017b). Our evaluation therefore suggests that the initiative has successfully reached people who would not otherwise have engaged, using an inclusive approach; as has been demonstrated in previous studies of community blood pressure checks (Kibler et al., 2018; Lomas and McLuskey, 2005). The kiosk and Health Trainer strands of the initiative included a workplace-based element, and this had an important role in facilitating access to a large number of people, especially men, who may not have otherwise had their blood pressure checked. Traditionally, men are hard to reach for blood pressure checks (Cordis Bright, 2018) and staff interviewed for the evaluation felt that in addition to convenience, features such as the body fat test offered by the kiosk might have particular appeal for men. However in terms of numbers, in each setting, we observed that there were still far more females than males engaging with the blood pressure checks.

Some excluded groups were identified, such as those with poor eyesight or learning disabilities; and wheelchair users, who would not be able to access blood pressure checks in kiosks and some of the other settings. Also, the standard cuff size used in each setting would make checks inaccessible to people with large arms. Other excluded groups would include some of those with mental health or other issues, who might not be able to understand the process, or might get unnecessarily worried.

At kiosk locations, the provision of information and advice leaflets would help the minority of users for whom lack of staff support was an issue. It was suggested that the standing position and lower forearm cuff for blood pressure measurement in the kiosks may have been a contributing factor in the apparent false positive readings that the researchers came across in two kiosk users. This may need to be investigated further.

Having more control over when and where to have a blood pressure check, as with the kiosk and pharmacy checks, was identified as an important factor in this evaluation. Previous studies have also found that members of the public report feeling empowered by being able to decide when and how often to check their blood pressure (Grant et al., 2015; Tompson et al., 2017b). They preferred being able to manage what they would disclose to the health care professionals (Tompson et al., 2017b). Self-monitoring has been seen as being used by some patients to gain control over their condition (Grant et al., 2015). This was also reported by the GPs interviewed in this evaluation, who suggested that it increases patients' confidence and facilitates them to take responsibility for monitoring their own blood pressure.

An increase in knowledge can be empowering. In behaviour change theory, the COM-B model identifies that behavioural changes occur as an interaction between capability, motivation and opportunity (Michie et al., 2011). For example, there were some members of the public who saw the kiosk but did not have the knowledge (an aspect of capability) that they were permitted to use it. However, once they had the knowledge, they were motivated to use it. Further, some pharmacy customers felt that they did not want to bother busy staff by asking for a check, even though they had seen the sign in the door encouraging them to do so. Personal approaches by pharmacy staff and Health Trainers were therefore identified as an important motivating factor, as were clearer, larger signs around kiosks.

Many members of the public who participated in this evaluation mentioned the advantages of having their blood pressure checked in a familiar setting. Hamilton et al (2003) also identified a preference amongst the public for non-medical locations in their study of self-screening kiosks. In their study, the kiosks were set in various places, including NHS venues, shops and post offices, with the authors noting that the three most popular venues were all non-medical (Hamilton et al., 2003). In other studies, those with previous high blood pressure reported that self-screening helped to reduce the 'white coat effect' (Sheppard et al., 2016; Tompson et al., 2017b). Our evaluation endorsed this finding, although there were exceptions.

The literature suggests that worries over measuring blood pressure in a public place may be viewed as a potential barrier for some (Tompson et al., 2017a), and that this may be a greater concern amongst some cultural groups (Tompson et al., 2017b). However, there is no 'ideal' location for community blood pressure checks (Tompson et al., 2017a). In this evaluation, although lack of privacy was an issue for a small minority of interviewees, it was generally felt that a good balance had been struck between an openness, encouraging people to be tested, together with some degree of privacy, with for example screens used where possible, or separate consultation rooms in pharmacies.

What is the opinion of staff who carry out blood pressure checks, and of key stakeholders on the implementation and delivery of the initiative?

Staff carrying out blood pressure checks received the training and implementation of the initiative very well. Although some difficulties had been encountered, face-to-face training was still considered the best option. Staff carrying out the blood pressure checks were comfortable with this extension to their role, which across the strands increasingly involves a more holistic approach (for example, in giving lifestyle advice). Staff viewed the initiative as not involving significant extra work overall and at the same time, job satisfaction and confidence levels were felt to have improved. However, it was reported by one of the wider stakeholders that some of the pharmacies who were signed up to the initiative had not been able to reach their target of 25 blood pressure checks, the reasons for which require further investigation.

While the aim is for the initiative to be non-pharmacist dependent, we observed a need to encourage pharmacy assistants to attend the training and for support to be given around data entry. For the FRS staff, there needs to be more clarity that they should offer the blood pressure check to those previously undiagnosed and not to those already under the doctor for high blood pressure. Whilst the FRS had a protocol that they used to identify which clients should be offered a blood pressure check, there was still some inconsistency in the way that the protocol was used.

This issue may be also more complicated for the Health Trainers; some members of the public who take up the offer of health checks may already have been diagnosed with high blood pressure. In addition, in future, 'train the trainer' schemes could be considered for each strand of the project. IT systems to feedback blood pressures to GPs still need further development.

Do community blood pressure checks lead to changes in behaviour and lifestyle?

Knowledge of healthy blood pressure levels is one of the first important steps in preventing hypertension in a community (Khatib et al., 2014; Kibler et al., 2018). Most people are aware of the importance of healthy blood pressure levels in avoiding health problems, but it has been estimated that only around half of all adults are aware of the actual level for a healthy reading (Kibler et al., 2018). Interventions that increase people's awareness of what their own blood pressure level is, what their

target blood pressure should be, and what they can do about it (diet, activity, monitoring etc.), can lead to positive lifestyle changes and increases in individuals seeking medical help (Cadilhac et al., 2015; Kibler et al., 2018). Studies have shown that those newly diagnosed through community monitoring can go on to achieve significant reductions in blood pressure, at least in the short term (Grant et al., 2015; McManus et al., 2005; PHE, 2018; Santschi V et al., 2014). More significant reductions are achieved where this is combined with additional support, such as from a nurse or a pharmacist (Sheppard et al., 2016; Uhlig et al., 2013).

In this evaluation, several interviewees reported an improved awareness of what their blood pressure readings meant and that they either had been, or would go to their GP as a result of their community blood pressure check. As noted, under the COM-B behaviour change framework, important components of long term behaviour change include opportunities for change, enhancing motivation and assisting capability (Michie et al., 2011). By providing convenient and easy access to checks and personalised lifestyle advice, the initiative appears to be addressing these components of behaviour change. In each setting, the advice given was tailored to the needs of the individual, depending on their blood pressure reading, with conversations around behaviour change and referral to lifestyle services or a GP where appropriate. It is thought that such approaches, including person-centred lifestyle support alongside blood pressure monitoring, could be effective as they involve helping individuals to identify and manage modifiable risk factors (Cordis Bright, 2018).

There was evidence in this evaluation of potential or actual lifestyle change amongst those with high blood pressure readings, as well as among those whose readings were normal, with some seeing the check as a 'prompt' into action. Similarly, in a study involving workplace blood pressure checks, having the test itself was seen as a prompt for taking some positive lifestyle changes including swimming, walking faster, more regular attendance at the gym, healthier eating (reduction in salt) and giving up smoking (Lomas and McLuskey, 2005). In two of the kiosk case studies, users had a high blood pressure reading at the kiosk, but a normal reading when followed up with their GP. In both cases, the individuals had nevertheless decided to continue with the lifestyle changes they had made since their kiosk visit. Health Trainers reported that they were seeing an increase in the number of referrals to their other services, such as weight management services and Stop Smoking services, as a result of the blood pressure checks.

Although the initiative in part appears to be addressing the COM-B components necessary for behaviour change, there are wider social and environmental factors that need to be considered. There are inequalities of opportunity to change lifestyle behaviours, with barriers including factors linked to deprivation, lack of time, caring responsibilities and the wider environment. The 'healthy village' idea mentioned by one of the GPs we interviewed, with the initiative seen as part of a broader approach to promote healthy lifestyle, may be one way forward to maximise the benefits of raising awareness of the risks of high blood pressure. Whether the initiative has

been equitable requires further consideration. Interventions that rely heavily on individuals being able and motivated to change their behaviour, described as highly “agentic”, may be less equitable than those that require recipients to use little or no agency to benefit (Adams, 2016).

In this evaluation, barriers to behaviour change relating to age and sex were noted. In interviews with staff, it was suggested that although older people may be more likely to accept being tested, they may be more resistant to change their lifestyle behaviours. They also felt that men were less likely to accept being tested and that if they are tested, may be more reluctant to accept the advice to seek medical help after a high blood pressure reading.

What are the key drivers that support good multi-partnership working to ensure the success of the initiative?

The collaboration between stakeholders in different strands of the initiative was regarded as excellent, with very good support from Champs and good attendance at steering group meetings. Collaboration with Halton Borough Council, who ran the training, was also described as very effective.

One of the important features of the training and the initiative in general was thought to be the consistent approach across C&M. Staff in each strand attended identical training courses based on the Champs guidelines for blood pressure testing, and delivered by the Health and Wellbeing team at Halton Borough Council. They were also each given identical blood pressure monitors. The stakeholders felt that C&M compared well to the rest of England in that large numbers of staff had been trained to take blood pressures as part of the initiative.

For the LPC and the FRS, the fact that the initiative was operated by an umbrella organisation such as Champs and therefore covered a whole region, rather than selected local authorities or postcodes, made the initiative easier to implement and deliver.

Limitations of the evaluation

The research process went smoothly, with no problems overall in recruiting members of the public for interviews in each setting. The exception was with the FRS S&W visits. FRS blood pressure checks are therefore under-represented in this evaluation. Even though early quantitative data shows that the FRS are reaching large numbers of people with high blood pressure who were previously undiagnosed (see Figure 2 in earlier ‘Background’ section), these cases are spread out over time and not easy for researchers to capture on a one-day visit. We had initially hoped to carry out up to 10 interviews, but only managed to observe a small number of blood pressure checks. We attempted to address this by asking the FRS to pass on details of householders who might be interested in taking part in an interview, with the householders’ permission, but this did not result in any further interviews.

There were differences in the geographical spread of the project. Although the pharmacies were located throughout C&M, the FRS visits included in the study were in Merseyside alone, the Health Trainer sessions were in Halton and the kiosks were in Warrington. However, as the primary focus of this qualitative study is people's experiences, rather than statistical comparisons, this was not regarded as a limitation.

Recommendations

Structural level recommendations

Who should act: Commissioners

- Ensure that IT systems are in place to record and report blood pressure measurements back to GPs and other relevant health professionals.
- For sustainability of the initiative, ensure that sufficient funding is in place for pharmacies.
- Ensure the initiative is part of broader multi-level approaches that aim to promote healthy lifestyles in order to improve equity. Monitor the impact of the initiative across different socio-economic groups.
- Aim for further improvements in creating equitable access to opportunities to change lifestyle behaviours.

Organisational level recommendations

Who should act: Pharmacies

- Conduct wider discussions with pharmacy staff, to find out why some pharmacies did not complete 25 blood pressure readings during wave 1 of the initiative.

Who should act: Health Trainers

- Ensure that members of the public have enough privacy when they are having their blood pressure checked (by using screens where necessary, for example).

Who should act: FRS staff and wider stakeholders

- Ensure staff are clear about who they should target for blood pressure checks.
- Develop opportunities to promote and communicate the expanded remit and value of FRS's role in health and wellbeing to the public.

Who should act: Staff responsible for managing kiosks and wider stakeholders

- Ensure that health literature and signposting for advice is available close to where the kiosk is located.

- Check accuracy of machines in measuring blood pressure.

Who should act: Organisations providing training

- Provide more guidance on how to approach members of the public to offer a blood pressure check.
- Provide more guidance on entering blood pressure results onto computer systems and ensure that staff are confident in recording blood pressure results on relevant computer systems.
- Ensure it is clear if the training provider is also responsible for recruiting participants to the training course.
- Ensure that it is clear that the training does not qualify participants to train other staff to participate in the initiative.
- Provide regular staff update training.

Who should act: All organisations involved in the initiative

- Consider future communication and marketing of the initiative, for example ensuring that the reason for doing blood pressure testing is effectively communicated to different groups, accounting for cultural differences, and differences in age and gender.
- Provide feedback on the results of the initiative to all staff, so they can see the importance of what they are doing.

Recommendations for future research

- Carry out further evaluation of blood pressure testing as part of future evaluations of the overall FRS Safe and Well scheme.
- Develop evaluation methods that will more effectively reach those targeted by the FRS as part of the blood pressure initiative (i.e. with previously undiagnosed blood pressure).

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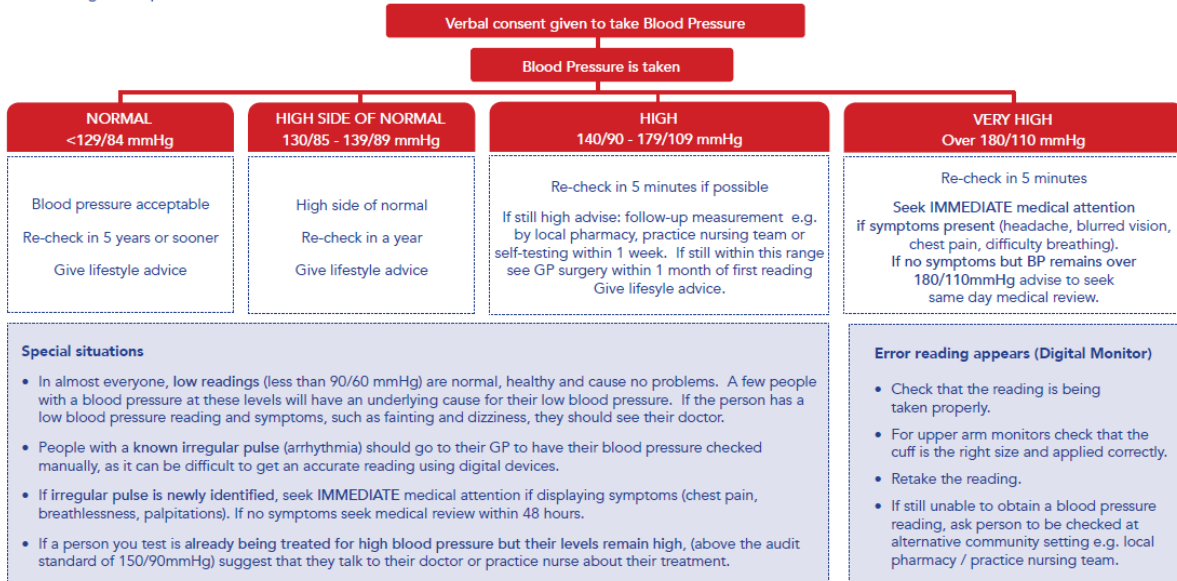
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Appendices

Appendix 1: Blood pressure testing guidelines

 Cheshire and Merseyside Guideline for Blood Pressure Testing (for use outside of General Practice)	This guideline has been developed for BHF-funded projects and is subject to review. It is intended to support the identification of adults aged 18 and over with possible high blood pressure, who are not pregnant and do not have a known irregular heartbeat.
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Follow the flow chart to see what information should be given, and what action needs to be taken depending on the person's blood pressure level. The reverse of this card contains information on accurate blood pressure measurement and accurate blood pressure monitors, as well as some common issues that may arise when taking blood pressure.



People using this pathway must have received relevant training and take blood pressure measurements as part of their role. Medico-legal liability for all people and organisations undertaking blood pressure measurement remains with the individual and/or their organisation.



With thanks to support from the British Heart Foundation



Blood Pressure UK
Helping you to lower your blood pressure

Based on guidelines produced by Blood Pressure UK

http://www.champspublichealth.com/sites/default/files/media_library/BP%20Guidance%20sheet%20final%205.10.17.pdf

Appendix 2: Warrington portable kiosk venues

The kiosk measures blood pressure, as well as heart age, BMI and body fat composition. It has been available at various locations for members of the public to use since October 2017. A full list of locations is shown below;

Date	Location
4-6 th October 2017	Woolston Depot – One day health event Transportation, Engineering & Operations Hawthorne Avenue Depot Hawthorne Avenue, Woolston Warrington, WA1 4AL
6 th – 23 rd October 2017	The Gateway, 85-101 Sankey Street, Warrington, Cheshire, WA1 1SR
23 rd October – 6 th December 2017	Warrington Borough Council – Main offices Business Support Centre New Town House, Buttermarket Street Warrington, WA1 2NH
6 th December 2017– 5 th February 2018	Livewire Orford Jubilee Neighbourhood Hub Jubilee Way, Orford, Warrington, WA2 8HE
5 th February – 5 th March 2018	Bath St Health & Wellbeing Centre Legh Street. Warrington, WA1 1UG
5 th March – 30 th April 2018	Warrington Hospital Lovely Lane, Warrington, WA5 1QG
30 th April -22 nd May 2018	Cockhedge Shopping Park
22 nd May – 1 st June 2018	Culcheth Hub, Culcheth Community Campus Warrington Road. Culcheth Warrington, WA3 5HH
1 st June 2018 – 15 th June 2018	Orford Community Hub Festival Avenue, Warrington WA2 9EP
15 th June 2018– 29 th June 2018	Fearnhead Cross Community and Youth Centre Insall Road, Padgate, Warrington WA2 0HB
2 nd July 2018 - 13 th July 2018	Burtonwood library Chapel Lane, Warrington WA5 4PS
13 th July 2018– 31 st August 2018	Woolston Neighbourhood Hub Hall Road, Woolston Warrington, WA1 4PNN
31 st August – 10 th October 2018	Gateway 85-101 Sankey Street, WA1 15R

10 th October – 12 th October 2018 (Event on 11 th)	Woolston depot health event Transportation, Engineering & Operations Hawthorne Avenue Depot , Hawthorne Avenue Woolston, Warrington, WA1 4AL
12 th October – 23 rd November 2018	Broomfields Leisure Centre, Broomfields Road Appleton, Warrington, WA4 3AE
23 rd November - 20 th December 2018	Warrington Borough Council Business Support Centre, New Town House Buttermarket Street, Warrington, WA1 2NH
20 th December 2018– 1 st February 2019	Orford Jubilee Neighbourhood Hub Jubilee Way, Orford, Warrington, WA2 8HE
1 st February 2019 – 30 th April 2019	Warrington Hospital, Lovely Lane Warrington, WA5 1QG

Appendix 3: Interview schedules

Questions for community pharmacists

- Can you describe your premises? What is your role? Who carries out the screening?
- What was it like setting up the service? Were there any challenges? What are the barriers and facilitators to the project? Following the initial set up, do you encounter any problems on a day to day basis?
- Is there anything you think could be improved about the project? Are there any elements that are working well?
- What training did staff receive in order to carry out the checks? Did you feel that was sufficient to carry out the checks, or was there anything else that you would have liked?
- How confident do you feel in advising service users? Do you follow any guidance for interpreting/acting on results?
- How do most people hear about the service? Do staff promote/advertise the BP check or wait to be asked? Do they promote the checks to all customers – or just as part of e.g. medicines reviews (i.e. is there evidence of asymptomatic members of the public requesting to have their BP measured?) Is there any off-site promotion/encouragement to come in and use?
- Is there any support offered during or after the screening, e.g. from a nurse or pharmacist? If someone has a high BP, do you report back to the person's GP (or other professional)? If not, how does it work leaving people to follow up their own results?
- Is there any provision of health promotion information alongside the monitor – or other ways of this being used as an opportunity for health promotion? (Tompson et al., 2017a) (Tompson et al., 2017a)
- Are people offered record cards?
- Is this an effective setting to deliver health checks?
- Do you feel that the service is suitable for everyone? Are there certain groups who use it more than others? Is the service well used? Could anything be done to enhance this?
- Do you use the Conversational Tool?
- Do you feel that people are making behaviour changes as a result of their BP check?
- Are there repeat people coming back to have their blood pressure taken?
- How confident are you about the accuracy of the machines? Are the machines calibrated?
- Are you reimbursed for providing the service? How does this work? Do you feel that the payment is enough to cover the amount of work that is involved?
- Do you feel that the initiative has any impact on health inequalities?
- Do you think that there are other community locations where the service might work well?

Questions for Health Trainers

- Where do you carry out the BP checks? Who carries them out (job role)?
- What was it like setting up the service? Were there any challenges?
- What training did staff receive in order to carry out the checks? Did you feel that was sufficient to carry out the checks, or was there anything else that you would have liked?
- How confident do you feel in advising service users? Do you follow any guidance for interpreting/acting on results?
- What are the barriers and facilitators to the project? Following the initial set up, do you encounter any problems on a day to day basis?

- How do most people hear about the service? Do staff promote/advertise the BP check or wait to be asked?
- Is this an effective setting to deliver health checks?
- Is there any provision of health promotion information? Is this individualised, according to the person's readings? Are there other ways of this being used as an opportunity for health promotion? Are people offered record cards?
- Is there any support offered during or after the screening, e.g. from a nurse or pharmacist?
- If someone has a high BP, do you report back to the person's GP (or other professional)? If not, how does it work leaving people to follow up their own results?
- Do you feel that people might be likely to make behaviour changes as a result of their BP check?
- Are there repeat people coming back to have their blood pressure taken?
- Do you feel that the service is suitable for everyone? Are there certain groups who use it more than others?
- Is the service well used? Could anything be done to enhance this?
- Have you heard of/ do you use the Conversational Tool?
- How confident are you about the accuracy of the machines? Are the machines calibrated?
- Is there anything you think could be improved about the project? Are there any elements that are working well?
- Do you feel that the initiative has any impact on health inequalities? (positive or negative) (e.g. people who wouldn't normally go to their GP – which groups?)
- Do you think that there are other community locations where the service might work well?

Questions for FRS staff

- What training did staff receive in order to carry out the BP checks? Did you feel that was sufficient to carry out the checks, or was there anything else that you would have liked?
- What are the barriers and facilitators to the project? Following the initial set up, do you encounter any problems on a day to day basis? Is there anything you think could be improved about the project? Are there any elements that are working well?
- Can you describe the process: How do you decide whether to do a BP check or not? Do you take the BP monitor into the house? Is everyone given a z-card, whether normal reading or high? What was it like carrying out this service? Were there any challenges?
- How confident do you feel in advising service users? Do you follow any guidance for interpreting/acting on results? If someone has a high BP, what happens next?
- Is there any provision of health promotion information? Is this individualised, according to the person's readings? Are there other ways of this being used as an opportunity for health promotion?
- Do you feel that people will make behaviour changes as a result of their BP check?
- Do you report back to the person's GP (or other professional)? If not, how does it work leaving people to follow up their own results?
- Is this an effective setting to deliver BP checks?
- Do you feel that the service is suitable for everyone?
- How confident are you about the accuracy of the machines? Are the machines calibrated?
- Are any changes needed to the wording on the S&W form?

- Do you feel that the initiative has any impact on health inequalities (positive or negative)?
- How well does the BP check work in practice compared to the other elements of the S&W check?

Questions for wider stakeholders

- What was your involvement in the project?
- What lessons have been learnt from the process of being involved in the project, including setting up the project, project management, partnership working. What are the drivers supporting successful multi- partnership working, with regards to this project?
- Describe the training for BP measurement (if they are directly involved), interpretation and subsequent action. Who has had the training and who is expected to do what?
- Have you seen any evidence that the checks have been effective?
- What are the facilitators to the project; is there anything that is working particularly well?
- Is there any off-site promotion/encouragement for people to go in and use the machines?
- Is there anything that could be improved about the project?

Questions for course trainers

- How receptive were the staff from each strand to the training?
- Were there any differences between strands in terms of how confident staff were?
- How clear is the protocol in terms of people who are under the care of the GP? The emphasis should be on catching people who are undiagnosed.

Questions for GPs

- Are you aware of BP checks in pharmacies or other community venues in your area?
- What are the advantages/disadvantages of community BP checks? (acceptability to patients; convenience/ease of access)
- Do you feel that BP checks in community settings are an effective use of resources?
- Have you had any referrals as a result of community BP checks? Has there been any impact on your workload as a result of the checks (increase or decrease?)
- Do you feel that patients are likely to change their behaviour as a result of the community BP checks?
- Do you feel that there has been an impact on Quality Outcomes Framework (QOF) screening targets?
- Do you feel that the community checks work particularly well for certain groups? Are there any groups that they are not suitable for?
- Is there anything you think could be improved about the project? Are there any elements that are working particularly well?
- Anything else you would like to say?

Questions for members of the public having their blood pressure taken in community pharmacies

- How did you find out that you could have your BP taken here? What made you decide to have your BP taken here (as opposed to at your GP surgery)?
- If this service wasn't here, would you have had your BP taken elsewhere? Where?
- Did you like using this setting as an alternative to GP for BP measurement? What do you think about the location? Were there any advantages compared to having your BP taken at your GP surgery?

- How did having your BP taken make you feel? Worried/reassured?
- Can you describe the process? What did you like or dislike about it?
- How long ago did you last have your blood pressure taken? Within the last year? Where?
- Did you have any idea what your blood pressure would be? What did you think about the reading? Do you know what the 2 numbers that make up the reading mean? Do you feel more aware now of the numbers for a healthy BP?
- Have you been assessed as having high blood pressure in the past? What (if anything) did you do about this?
- Did you receive any lifestyle advice? Were there any advantages to receiving lifestyle advice in this setting, compared to receiving advice at your GP surgery?
- How is your health in general? How do you think your BP compares with the population as a whole?
- Do you think that people can do anything to lower their blood pressure? Are you likely to make any changes after having you BP checked today?
- Were you referred on to any other services as a result of your BP check? If yes, could you tell us about that? Have you made any changes as a result of that referral? If you refused a referral, were there any reasons for this? Were there any barriers to taking up the referral/would anything have made it easier for you to take up the referral?
- How could the service be improved? Was there anything that you didn't like about having your BP done? Would you return to have it taken here again?
- Is there anyone who you feel the service wouldn't be suitable for?
- Are there other locations where you think the service might work well?
- Record age bracket and local authority area.

Questions for people having their blood pressure taken by health trainers

- How did you find out that you could have your BP taken here? What made you decide to have your BP taken here (as opposed to at your GP surgery)? If this service wasn't here, would you have had your BP taken elsewhere? Where?
- Did you like using this setting as an alternative to GP for BP measurement? Were there any advantages compared to having your BP taken at your GP surgery?
- What do you think about the location? What do you like or dislike about the setting or about the initiative?
- How did having your BP taken make you feel? Worried/reassured? Can you describe the process of having your blood pressure taken?
- How long ago did you last have your blood pressure taken? Within the last year? Where?
- Did you have any idea what your blood pressure would be? What did you think about the reading? Do you know what the 2 numbers that make up the reading mean? Do you feel more aware now of the numbers for a healthy BP?
- Did you receive any lifestyle advice? Were there any advantages to receiving lifestyle advice in this setting, compared to receiving advice at your GP surgery?
- After your test, do you feel more aware of the risk factors that can cause high BP? (including lifestyle factors)
- How is your health in general? How do you think your BP compares with the population as a whole?
- Have you ever been assessed as having high blood pressure in the past? What (if anything) did you do about this?
- Have you made any changes since having your BP taken at ...? Do you think that people can do anything to lower their blood pressure?
- Were you referred on to any other services as a result of your BP check? If yes, could you tell us about that? Have you made any changes as a result of that referral? If you

refused a referral, were there any reasons for this? Were there any barriers to taking up the referral/would anything have made it easier for you to take up the referral?

- How could the service be improved? Was there anything that you didn't like about having your BP done?
- Is there anyone who you feel the service wouldn't be suitable for? Are there other locations where you think the service might work well?
- Would you return to have it taken somewhere like this again?
- Record age bracket and local authority area.

Questions for people having their blood pressure taken as part of the S&W check

- Did you like using this setting as an alternative to GP for BP measurement? If not for the fire service visit, would you have had your BP taken elsewhere? Where?
- How did having your BP taken make you feel? Worried/reassured?
- Can you describe the process? How did you feel about it – comfortable/uncomfortable? Etc.
- What do you like or dislike about the setting or about the initiative? (for example; convenience, user control/empowerment?) Were there any advantages compared to having your BP taken at your GP surgery?
- How long ago did you last have your blood pressure taken? Within the last year? Where?
- Did you have any idea what your blood pressure would be? What did you think about the reading? Do you know what the 2 numbers that make up the reading mean? Do you feel more aware now of the numbers for a healthy BP?
- Did you receive any lifestyle advice? After your test, do you feel more aware of the risk factors that can cause high BP? (including lifestyle factors)? Were there any advantages to receiving lifestyle advice in this setting, compared to receiving advice at your GP surgery?
- How is your health in general? How do you think your BP compares with the population as a whole?
- Have you ever been assessed as having high blood pressure in the past? What (if anything) did you do about this? Have you made any changes since having your BP taken? Do you think that people can do anything to lower their blood pressure?
- Were you referred on to any other services as a result of your BP check? If yes, could you tell us about that? Have you made any changes as a result of that referral? If you refused a referral, were there any reasons for this? Were there any barriers to taking up the referral/would anything have made it easier for you to take up the referral?
- Do you feel the blood pressure check fits in with the rest of the S&W check?
- How could the service be improved? Was there anything that you didn't like about having your BP done? Is there anyone who you feel the service wouldn't be suitable for?
- Would you like to be able to have your BP checked more often? Any suggested locations for this (pharmacy, or other community venues?)
- Record age bracket and local authority area.

Questions for people using Wellpoint Kiosks

- How did you find out that you could have your BP taken here? What made you decide to have your BP taken here (as opposed to at your GP surgery)? Were there any advantages to having your BP taken here, as opposed to at your GP surgery?
- What were the advantages and disadvantages of carrying out a BP check yourself? Do you feel that it works well that a member of staff is not present during the BP check? Do you think it would have made a difference if a member of staff was there during your check? Would this have had any impact on any changes that you made after having your check?

- If this service wasn't here, would you have had your BP taken elsewhere? Where?
- Did you like using this setting as an alternative to GP for BP measurement? What do you think about the location?
- How did having your BP taken make you feel? Worried/reassured? Can you describe the process?
- How easy did you find the kiosk to use? Were you given any instructions? Do you think the kiosk would work better for some groups of people than others?
- What do you like or dislike about the setting or about the initiative?
- How long ago did you last have your blood pressure taken? Within the last year? Where?
- Did you have any idea what your blood pressure would be? What did you think about the reading? Do you know what the 2 numbers that make up the reading mean? Do you feel more aware now of the numbers for a healthy BP?
- Did you receive any lifestyle advice? After your test, do you feel more aware of the risk factors that can cause high BP? (including lifestyle factors)
- How is your health in general? How do you think your BP compares with the population as a whole? Have you ever been assessed as having high blood pressure in the past? What (if anything) did you do about this?
- Will you/have you made any changes since having your BP taken at ...? Do you think that people can do anything to lower their blood pressure?
- Were you referred on to any other services as a result of your BP check? If yes, could you tell us about that? Have you/will you make any changes as a result of that referral? If you refused a referral, were there any reasons for this? Were there any barriers to taking up the referral/would anything have made it easier for you to take up the referral?
- How could the service be improved? Was there anything that you didn't like about having your BP done? Would you return to have it taken somewhere like this again?
- Are there other locations where you think the service might work well?
- Record age bracket and local authority area.

Questions for people taking part in case studies

- When was your blood pressure check? Where was it taken?
- Were you advised to go to your doctors for a re-check?
- What –if any- action have you taken as a result of your check? Have you made any changes to your lifestyle – e.g. Diet, exercise, smoking, alcohol, salt, stress?
- Were you referred anywhere? Did you take up the referral? If not, why not? If yes, how useful has that been?
- Have you had your BP taken again since then? How is your health now?
- Do you have any other comments about the service? What was good about it, or how could it be improved?

