

NHS Birmingham East & North

An insight into the NHS Health Check Programme in Birmingham;
Summary Report

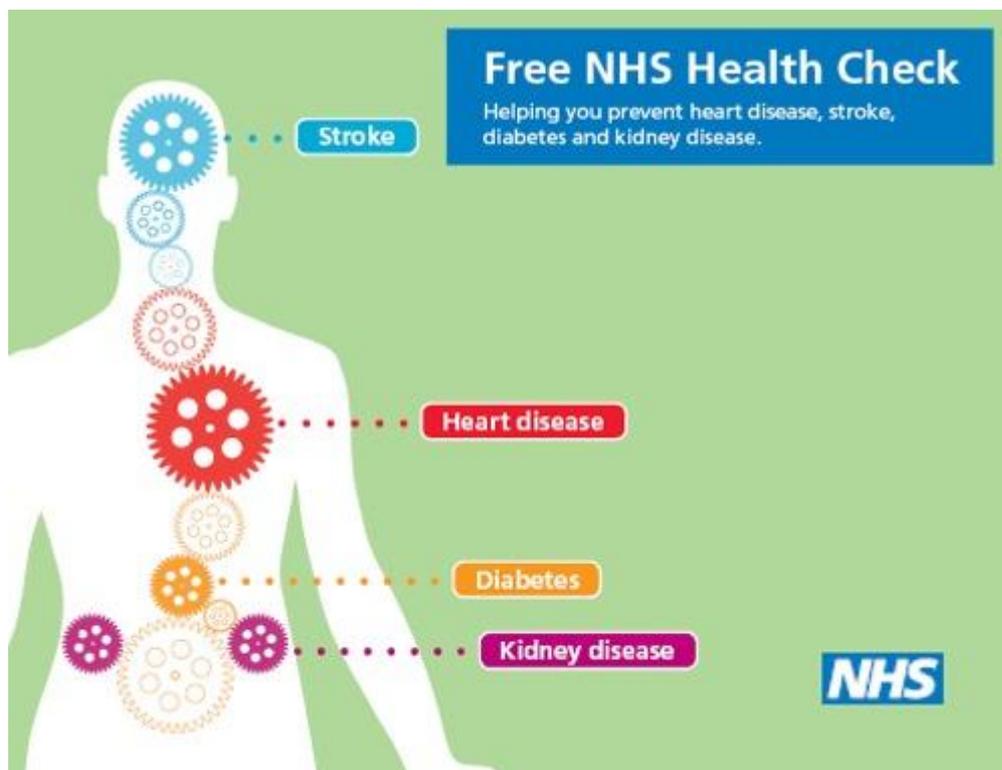
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Executive Summary

The NHS Health Check screening programme intends to prevent, delay the onset, or provide early detection of Cardiovascular Disease (CVD) (DoH, 2009). The aim of the Health Check is to provide each participant with their 10 year CVD risk score and a personalised management plan to help them reduce or manage that risk.

Given that the effective implementation of this screening programme has become a high priority within many NHS Trusts across England, a research project was commissioned by the Birmingham Sandwell & Solihull Cardiac Stroke Network (BSSCSN) in order to gather an insight into people's experiences of the NHS Health Check Programme in Birmingham.

A semi-structured interview was designed to explore people's views and experiences of the health check programme. A sample of 10 participants who had recently attended an NHS Health Check during the first two weeks of February 2011 and March 2011 were recruited to take part in a semi-structured interview. The narratives were subjected to interpretative phenomenological analysis.

Analysis of the participants' accounts demonstrated a lack of understanding & awareness of both the existence of and the purpose of the NHS Health Check Programme. Participants perceived the NHS Health Check as a general 'health MOT' rather than a communication of risk for future CVD. Many participants viewed their Health Check as an opportunity for reassurance or confirmation of positive health. The findings highlighted the need for the meaning of the results to be explained and put into context for participants.

Based on these findings, a list of recommendations has been made in order to support the delivery of the NHS Health Check Programme in Birmingham. The key recommendations centre on improving peoples' understanding of the NHS Health Check as an assessment of risk for future CVD.

1.0 Introduction

This report describes a qualitative research project commissioned by Birmingham Sandwell & Solihull Cardiac and Stroke Network (BSSCSN) to gain an insight into the impact of the NHS Health Check programme.

Specifically, the network were interested in understanding how the Health Check programme was working in Birmingham, what was happening when people attended their Health Check appointment and how effective this experience was in leading to lifestyle changes aimed at lowering the health risks associated with Cardiovascular Disease (CVD).

The present report is intended to provide a brief summary of the main findings and recommendations.

A more extensive research report has been prepared for the Department of Health and an academic paper is being prepared for submission to an appropriate scientific journal.

2.0 Contextual Background

2.1 Birmingham, Sandwell & Solihull Cardiac and Stroke Network (BSSCSN)

The BSSCS network is made up of clinical, managerial, commissioning and care teams who are involved in cardiac and stroke care in Birmingham, Sandwell and Solihull. The teams work together to improve the experience and health outcomes of local people. The Network is made up of members of several health organizations from across the city, including those from NHS Birmingham East and North (NHS BEN) which are now part of the NHS Birmingham & Solihull Cluster.

The network has two expert groups, the stroke steering group, and the cardiac clinical advisory group who advise service commissioners. Pivotal to the work of the network is ensuring the consistent engagement of service users and their carers in the planning of new service models. An important aspects of this work is understanding the user experience and using patient narratives (stories) to compare planned care with actual care given.

2.2 NHS Birmingham East and North

NHS Birmingham East and North (NHS BEN) is one of three primary care trusts in Birmingham and has been responsible for commissioning services for the health and wellbeing of the 440,000 people it serves across 17 diverse wards in the east and north of the city. As this study was undertaken prior to the development of the NHS Birmingham & Solihull Cluster, NHS Birmingham East & North is mentioned exclusively due to the commissioning landscape at that point in time.

2.3 Cardiovascular disease

Cardiovascular disease (CVD) is the leading cause of death in England and Wales. In 2005, CVD was the cause of one in three deaths, accounting for 124,000 deaths; 39,000 of those who died were younger than 75 (NICE, 2010).

Health conditions associated with CVD, such as coronary heart disease (CHD), stroke, diabetes and chronic kidney disease (CKD), share a number of common modifiable and preventable risk factors; obesity, smoking, sedentary lifestyle, hypertension, and high cholesterol all of which increase an individual's risk of developing CVD.

CVD predominantly affects people older than 50 and age is the main determinant of risk. Apart from age and sex, three modifiable risk factors – smoking, raised blood pressure and raised cholesterol make a major contribution to CVD risk, particularly in combination. These account for 80% of all cases of premature coronary heart disease (CHD) (Emberson et al, 2003).

The consequences of cardiovascular disease can therefore be ameliorated through behaviour change and adoption of a healthy lifestyle, such as through stopping smoking, reducing fattening foods and increasing exercise.

2.4 NHS Health Checks Programme

In 2008, The Cardio & Vascular Coalition (CVC) (British Heart Foundation, 2008) recommended that a future Government Cardio & Vascular Health Strategy in England should be developed in partnership with the Department of Health (DH) and NHS, with the aim of influencing the health and wellbeing of the nation, on the basis that cardiovascular disease accounts for the highest number of premature deaths in the UK.

The NHS Health Check screening programme was subsequently introduced in April 2009 by the Department of Health (DH), which aims to prevent, delay the onset, or provide early detection of CVD (DH, 2009). The implementation of this screening programme has become a high priority within many NHS Trusts across England. Both commissioners and clinicians have been provided with clear guidance on the NHS Health Check programme following the publication of 'Best Practice Guidance' (*Putting Prevention First: NHS Health Check: Vascular Risk Assessment and Management. Best Practice Guidance*) by the DH, (2009). This guidance stipulates that both males and females between the ages of 40 and 74, who have not already been diagnosed with CVD, should be invited to attend an NHS Health Check appointment every five years.

An assessment interview requires the individual to answer a number of lifestyle and family history questions, followed by measurement of clinical metrics such as blood pressure, height weight and cholesterol.

The aim is provide each participant with their 10 year CVD risk score and a personalised management plan to help them reduce or manage that risk. Following the assessment, appropriate referrals should be made to supporting services such as smoking cessation, health trainers and GP practice.

3.0 Methodology

Every stage of the research, including design, implementation and reporting was undertaken in collaboration with the cardiac clinical advisory group at NHS BEN.

3.1 Qualitative Methodology

A qualitative approach, which aims to provide rich or 'thick' data (Charmaz, 2001) was chosen, in order to achieve an in depth understanding of participants' experience of their NHS Health Check appointment.

Qualitative research interviews were selected as the methodology of choice, as the approach is believed to encourage openness and provide opportunity for participants to share their views and experiences (Smith, 2003). Qualitative interviews provide insight into the question of 'why'. Willig (2001) suggests that the 'why' line of questioning maximises the potential to gain insight and to understand the view of the participant.

3.2 Method of Analysis: IPA

Interpretative Phenomenological Analysis (IPA) was selected as the method of analysis to interpret as accurately as possible the subjective experiences, beliefs and views of the individual, and the meaning each experience holds for them (Smith, 2003).

The nature of the exploration of the person's experience using IPA can be described as phenomenological, that is it is concerned with that individual's particular account of their reality, rather than the objective reality itself and that this is independent of the researchers perspective (Smith, 1995). However, IPA is also interpretative in that the analysis allows for the investigator's interpretation of the narratives.

3.3 Semi-structured interview

The participants were invited to take part in a face-to-face semi-structured interview with the researcher (LC), as proposed as the exemplary method of data collection for IPA studies (Smith & Osborn, 2003).

The aim of the semi structured approach was to encourage the participant to talk about their experience of the process of having a NHS Health Check and how this may have impacted on them, prompting where necessary.

An interview schedule was constructed, based on the following framework:

- Knowledge of the NHS Health Check Programme prior to appointment
- Perceptions of the invitation method
- Perceived value of lifestyle advice & information given
- Receiving the results
- Improvements to the NHS Health Checks Programme

The interview guide is available in Appendix A.

3.4 Ethical approval

Ethical approval for the study was sought from Coventry and Warwickshire Research Ethics Committee. This was granted in January 2011.

3.5 Sampling

The sample was drawn from participants who had attended an NHS Health Check during the first two weeks in February 2011. The initial response rate was low. Therefore, a second recruitment drive was undertaken and participants who had attended an NHS Health Check appointment during the first two weeks of March 2011 were contacted and invited to participate in the research.

3.6 Procedure

Participants were approached by letter, inviting them to take part in the research and requesting that they provided written consent. All consenting participants were contacted by the researcher to arrange a convenient interview time.

3.7 Response Rates

Overall, 345 recruitment letters were issued and 21 consent forms were returned, indicating the individuals who were willing to take part in the NHS Health Check Interviews. The researcher made contact with all these individuals and recruited 10 to attend an interview which took place between May to July 2011. Of the remaining individuals, the researcher was unable to reach 5 participants, 2 participants had given incorrect contact details, 1 participant was unavailable and 3 participants had decided that they no longer wanted to participate.

3.8 Sample

The sample consisted of 8 females and 2 males, all of whom had attended the NHS Health Check screen approximately six weeks previously. The mean age was 58.4 years and ranged from 46 and 75 years. With regards to ethnicity, 9 of the sample were White British and 1 was Mixed White.

All participants were people who had not previously been diagnosed with CVD and were registered with a GP in the area of north and east Birmingham, UK.

3.9 Interviews

The interviews were conducted at The Perry Tree and Partners in Health Primary Care Health Centres in the locality of East and North Birmingham. The interviews were guided by the interview schedule with prompts being used to keep the interview on track. All interviews were digitally recorded for transcription at a later date. Interviews lasted for a duration of 45 to 60 minutes.

4.0 Analysis

4.1 Interpretative Phenomenological Analysis (IPA)

The results were analyzed using IPA, which takes a stepped approach (Smith, 2003).

First the recordings were transcribed by an external transcriber. All participants were given a pseudonym for the process of transcription and analysis.

The text was read and re-read a number of times for the researcher to become acquainted with the narratives. During this time the text was annotated with a number of comments and possible themes were noted. These annotated notes and potential themes were further developed by the first author. These initial themes were based not only on prevalence, but richness of information and how the theme related to others within the texts. At this stage 24 themes were drawn out.

These 24 themes were then compared for content and reduced to leave a total of five sub-themes. This development of initial themes and sub-themes allowed extraction of two master themes. The second author discussed and agreed the initial themes, sub-themes and master themes. These themes allowed for the construction of the narratives presented in the results section.

4.2 Triangulation of data

According to O'Donoghue & Punch (2003), triangulation is a "method of cross-checking data from multiple sources to search for regularities in the research data. The purpose of triangulation in qualitative research is to increase the credibility and validity of the results (Denzin, 2006).

To facilitate triangulation of the current data, in addition to the review of the initial analysis by the second author, a brief telephone interview was undertaken with the transcriber to explore his perceptions of emerging patterns and regularities in the data.

The themes independently identified by the researcher and the transcriber were then cross-checked to validate interpretations and give 'a more detailed and balanced picture of the situation' (Altrichter et al., 2008). Comparisons of the identified themes from each evaluator highlighted considerable similarities in the interpretations of data which reinforced the validity of the analysis.

5.0 Results

5.1 Overview of Findings

The analysis identified two master themes from the participants' accounts of their experience of the NHS Health Check programme; 1) understanding and awareness, which had four sub-themes and 2) reassurance which had a single sub-theme.

A diagrammatic representation of master themes, sub-themes & initial themes can be found in Appendix B

5.2 Master Themes & sub themes

Understanding & Awareness

The first master theme, 'understanding and awareness' included sub-themes which related directly to participant's own perceptions and knowledge of the NHS Health Check programme. These sub-themes tell a story about how participants had no previous awareness of the NHS Health Check Programme and how they perceived the NHS Health Check as a 'Health MOT', with little understanding of the Health Check as an assessment of risk for future CVD. Participants' narratives associated with this theme also describe the need for putting Health Check results into context, to enable people to understand.

The four sub themes were: *i) perception of NHS Health check as a general routine health check, ii) understanding of NHS Health Check programme, iii) a focus on health, iv) meaning of results*

i) Perception of NHS Health Check as a general routine health check: Many patients were not aware that the health check was specifically a CVD health screen. Several of the participants explained how they had perceived the health check as more of a 'general health check'.

"I just assumed that they would test you for everything when you were there. My perception of reading through things was that it was going to be a good overhaul, you know overall body check for everything, so I don't think it was as in depth as I thought it was going to be" (Rachel)

It became apparent from their accounts, that many of the participants perceived the NHS Health Check to be a 'quick check to see if everything was ok'; "an overall body check" (hence the reference made to an MOT) rather than an assessment of risk or an opportunity to review health and lifestyle behaviours.

Many participants had their own thoughts and ideas about how they felt the health check screen could be broadened. Several participants described how they felt that the health check would benefit from being expanded to include further screening tests which included a 'well woman check', a 'cancer screen' and a 'diabetes check'.

ii) Understanding of NHS Health Check Programme: None of the participants included in this sample were aware of the NHS Health Check programme prior to receiving their appointment letter and had “never heard anything about it”. Some participants described how they had confused their health check appointment with other health appointments.

“I have a few problems with blood pressure so they kind of kept a check on me, so I thought this was something to do with that” (Charlie)

It would seem that participants had a range of experience, in terms of how much information they recalled receiving about their appointment at the point of invitation.

There was a strong theme in participant’s narratives that more information at the point of invitation could be beneficial.

iii) A focus on health: Participants described how receiving their results had impacted on their health. Many of them commented how the experience of the health screen had prompted them to think about their health.

“It (health check) brings it to the forefront that health is important” (Bruce)

There was a strong sense that emerged from participants’ narratives that attending the appointment had ‘underlined the importance of looking after [their] health”. Two participants described how they had made changes to their lifestyles as a result of the advice and guidance which they had been given at their appointment. But several participants’ accounts described how they had also recently had awareness heightened because of illness in family or other health problems of their own.

iv) Meaning of results: Participants spoke about the experiences of receiving their results at the health check and described a range of experiences. Some participants explained how they had received a written summary or print out of their results, whilst others described how they had had their results explained verbally. There was a strong sense amongst the narratives that receiving results in writing, such as a print out, was more beneficial. One participant’s account indicated that receiving written results may have prompted her to act on them.

“The results should be sent to you and you can act on them that way” (Anna)

A number of participants described some uncertainty about how to interpret their results. Many of the participants highlighted the need to have their results put into context to enable them to understand.

“The conclusion was I have a 6% chance of getting heart disease, which on one hand sounds good because 6 people out of one hundred, but then if I’m one of those 6...so I feel very unclear about it. As I say, I ended up with a 6% chance of having a heart attack so my first reaction was oh good, but then my daughter said oooo our GP’s look at it when it’s getting near 10 and I thought well how close to 10 is 6 so , you know...is 6 percent good?” (Sue)

For some participants this involved being given written results and information leaflets, for others this involved making social comparisons to similar others, whilst some participants were keen to know how their results compared to the general average.

“I think the results could have been explained a bit clearer. It was nice having the sheet to bring home. On the computer it’s colour coded and highlighted but of course the one you get is just shades of grey so when you take it home you don’t know which ones are highlighted as red, green or amber. Maybe you could highlight it with a pen yourself to see where about you are in comparison” (Nasreen)

Reassurance

The master theme ‘reassurance’ refers to sub-themes that emerged from the narratives which related to participants’ need to check and confirm that they were in good health. This master theme is thought to illustrate how participants perceived themselves as ‘passive patients’ attending a health check for confirmation that they were free from CVD.

There is a single sub theme under this master theme which is: *reassurance mechanism*.

A reassurance mechanism: All participants described attending their health check as a positive experience. They described a number of different reasons for attending their appointment. For the majority of participants these included ‘ensuring good health’ and ‘getting checked’. Here Bruce explains his reasons for attending his health check appointment.

“possibly part of the driving force to go was the intrigue to know that I am alright, like a reassurance thing” (Bruce)

Other reasons which became apparent from participants narratives included a re-focus on own health, the recent loss of a family member, using the opportunity for a health MOT and an awareness of a family history of CVD. Many of the participants spoke about the importance of getting checked because of their age.

Many of the participants explained how they had felt reassured about their health after receiving their results. For many of the participants, the health check appointment appeared to have a confirmatory role in that participants appeared to interpret their results as that they were free from CVD.

Some participants also described how the role and reaction of the health professionals had contributed to their sense of reassurance. Interestingly, a sense of reassurance also emerged even when participants described receiving mixed test results. Some participants seemed to selectively focus more on their positive results.

5.3 Summary of key findings

- Analysis of the participants' reports demonstrated a lack of understanding & awareness of both the existence of and the purpose of the NHS Health Check Programme
- Participants had perceptions of NHS Health Check as a 'general health MOT'
- The Health Check appointment appeared to lead to an increased awareness of the importance of health
- There is a need for the meaning of results to be explained and put into context for participants to understand
- The findings emphasised both a reassuring and confirmatory role of the Health Check of positive health

6.0 Summary

The BSSCS Network commissioned this research project into the NHS Health Check programme in order to gather an insight into people's experiences of the NHS Health Check Programme in Birmingham.

The research utilised a qualitative methodology to explore people's views and experiences who had recently attended a health check. The narratives were subjected to interpretative phenomenological analysis.

Based on these findings, a list of recommendations has been made in order to support the delivery of the NHS Health Check Programme in Birmingham.

7.0 Recommendations

Through the course of this research, many factors have been identified which may impact on the delivery of the NHS Health Checks Programme in Birmingham. Overall, perceptions of the value of the NHS Health Checks among attendees are high. All participants valued the opportunity to attend for a health check. The recommendations that we feel are most important centre on how the NHS Health Check is currently being perceived by participants; as a confirmatory general health MOT rather than a communication of CV risk and what strategies can make it more effective as an assessment of risk for future CVD.

The recommendations included below have been derived from the primary research conducted with the public in Birmingham. The section has been segmented and works chronologically through the NHS Health Check process in order that key recommendations can be highlighted. The following areas will be covered:

- The NHS Health Check Concept
- Invitation letter content
- Communicating risk and providing results

The NHS Health Check Concept

- Promote the NHS Health Check as a preventative approach to CVD as opposed to a 'check up'
- Emphasise the Health Check as a screen for 'risk'
- Distinguish the NHS Health Check from other health appointments
- Use of terminology including 'assessment of risk' 'prevention of CVD' 'management of lifestyle factors'
- Stress the difference between 'prevention', 'treatment' and 'cure' to avoid confusion

The NHS Health Check needs to be promoted as a stand-alone risk and lifestyle assessment, which is distinguishable from other routine tests and check ups. The narratives suggested that there is a lack of awareness amongst participants about the aims and purpose of the NHS Health Check. Specifically, the participants perceived the health check as an opportunity to confirm that they were in good health rather than an assessment of risk.

The themes identified in this research project indicated that many of the participants saw themselves as 'passive patients', seeking reassurance from the Health Check that they are free from CVD, rather than able self-managers of associated CVD risk factors.

It is suggested that for the NHS Health Check to be perceived as an assessment of risk for future CVD, the Health Check needs to be marketed as a preventative approach to CVD as opposed to a 'check up'. Stressing the difference between 'prevention', 'treatment' and 'cure' is important to avoid confusion and raising people's expectations.

Many of the participants taking part in the research described the NHS Health Check as being a series of clinical tests. Although their health and lifestyle behaviours were discussed during the assessment, this was for many participants second to having their blood pressure and cholesterol measured. For the NHS Health Check to be an effective assessment of lifestyle and risk, a change in participants' perceptions is needed. It is vital that practices promote healthy living messages and encourage positive behaviour change to all individuals that they see, regardless of their risk level.

Furthermore, it shouldn't be assumed participants have the same basic knowledge and understanding of CVD – this is vital if people are to understand why the NHS Health Check is important and how their lifestyle behaviours affect their bodies. Care should be taken to emphasise that the health check will screen for risk and why management of identified risk factors are important in the prevention of CVD.

In order that people understand the NHS Health Check concept, the appointment should be offered as a standalone and therefore distinguishable from other appointments. This would ensure that the participant is provided with the full thirty minutes to discuss their health, lifestyle behaviours and risk factors in depth.

Invitation Letter Content

- Make reference to risk and cardiovascular disease
- Include an outline of the purpose of the assessment tests and how the tests will be carried out during the assessment
- Mentioning participants' age in the letter could increase engagement with the programme
- Avoid references to "Health MOT"

The narratives obtained during this research suggests that in many cases, from the information provided in the invitation letter, participants do not accurately understand the purpose of NHS Health Check programme. As previously stated, the NHS Health Check Programme was perceived by participants as a "general health MOT", rather than an assessment of risk specifically for cardiovascular disease.

It is recommended that health professionals discussing the programme with participants refrain from using the term 'health MOT' and it is not used in the appointment letter. This terminology does not effectively communicate the aims of the programme and leads to confusion about the NHS Health Check is and the participants' responsibility in managing their own risks.

A large proportion of this research sample linked the importance of looking after their health to their age. Many participants said their motivation for attending was because they were; "*at that age now*". Mentioning people's age in the appointment letter could increase engagement with the programme as the narratives indicate that the value placed on attending health screens increases with age.

It is therefore recommended that the following is considered with regards to NHS Health Check invitation letters:

1. Reference to the individual's age.
2. Outline clearly what the assessment is for
3. Discuss risk and cardiovascular disease
4. Avoid references to "Health MOT"

Communicating risk and providing results

- NHS Health check attendees prefer written confirmation of their assessment results
- Practices should provide written results regardless of their risk score
- A letter to attendees outlining test results and associated risk of developing cardiovascular disease would be beneficial
- Communicating risk needs to avoid ‘% risk’ and instead focus on low, medium or high risk of developing specific diseases
- Results need to be put into context by providing attendees with information sheets and graphs

Participant’s narratives indicated that they preferred written results, regardless of their risk level. It is recommended that all participants are sent a letter following their NHS Health Check. This should outline test results and associated risk of developing cardiovascular disease. Providing a tangible outcome to the NHS Health Check is more likely to lead participants to feel the programme has been completed. It may also increase their overall awareness of their health status, which may encourage empowerment and renewed responsibility to improve their lifestyle.

Through engaging with those who have taken part in an NHS Health Check, it has been identified that NHS Health Check facilitators may not be discussing risk or communicating risk levels to their participants effectively. This is a vital element to the programme and risk levels must be communicated to all participants, even those who are determined to have low risk of developing cardiovascular disease, in a way that is easily understood by the participant.

The feedback obtained in this study from NHS Health Check participants suggests that communicating risk by way of percentages can be confusing, as for non-health professionals it has little context. It is important for those delivering the NHS Health Check to provide context to the risk level, allowing the participants to personalise the information given.

Based on the findings from this research, it is recommended that communication of risk needs to avoid ‘% risk’ and instead focus on low, medium or high risk of developing specific diseases. Several of the participants in this particular sample highlighted the benefit of seeing colour coded graphs (red, amber, green) to demonstrate their level of risk.

A further recommendation is that additional research is conducted into the communication of risk, to identify which classifications (traffic lights, graphs, numerical) best communicate risk levels to participants and help people to put their results in context. This information could then be translated into a variety of information sheets and provided to practices, to inform how they discuss risk with NHS Health Check participants.

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Appendix A

NHS Health Checks Interview Schedule

Welcome

The researcher will introduce themselves to the participant and outline the purpose of the research.

The researcher will explain that NHS Birmingham East and North has commissioned a research project to investigate people's experiences of attending a NHS Health Check appointment and any impact this may have had on them.

The researcher will make sure that the participant understands the nature of the semi-structured interview and how long it is likely to take, the safeguards around anonymity, confidentiality and obtain consent for the interview to be recorded.

The researcher will introduce each section of the semi-structure interview as indicated below, to orientate the participant.

A. Personal details

Please could you give me the following details:

- Age
- The area you live in
- Ethnicity (participant will be given choices)
- Your GP practice
- Can I confirm that you have recently attended an NHS Health Check?
 - Can you tell me when / how long ago?
 - Can you tell me where it took place?

B. Before your NHS Health Check appointment

I would like to ask you about your experience of attending the NHS Health Check appointment, starting with any information or concerns you might have received before you attended;

- How did you hear about the NHS Health Check?
 - How were you invited to attend; letter, telephone call ?
- Did you receive any information about the NHS Health Check before you came, such as a letter or leaflet or explanation over the phone?
 - If yes - was this information helpful?
 - Did you know what would happen during your appointment?
 - Did you know anyone else who had been to one of these appointments before ; had you spoken to them about it?

- Were you worried about attending the appointment?
 - If yes, could you say why?
- Did you know where to go for your appointment?
 - Was it easy to find?
 - Were you able to get there easily
 - Were you able to park?
 - Were you able to find the right room / clinic easily?
- What made you decide to attend the NHS Health Check appointment?
 - Because it is free, you were asked to, you were worried about your health, the doctor advised you to go

C. Experience of NHS Health Check appointment

I would like to ask you about your experience of attending the NHS Health Check appointment;

- Do you know what sort of health professional did your NHS Health Check?
 - Healthcare Assistant, Practice Nurse, GP
- When you arrived, did someone explain what was going to happen?
 - Did you understand what they said?
- Can you tell me what happened during your NHS Health Check?
 - Did they explain things at each stage/ each test during the appointment?
 - Did you understand what they said to you?
 - What was the **most** helpful part/ aspect?
 - What was the **least** helpful part /aspect?
 - Was there anything **not** included in the appointment that you had expected to happen – such as given test results or lifestyle advice?
 - Do you think the person have done things in a different way
- How did you feel at the end of the appointment?

D. Information and advice

I would like to ask you about any information and advice you were given during the NHS Health Check appointment.

- Were you given any **information** during the appointment, such as about your blood pressure or cholesterol?
 - Did you find this helpful?
 - Were you told anything unexpected or surprising? How did this affect you?

- Can you remember how it made you feel?
- Were you given any **advice** during the appointment, such as how to improve your health?
 - Lifestyle such as stop smoking, increase activity and weight management
 - What did you think of the advice / information – was it helpful?
 - Were you referred into any services? (Quit smoking, Size Down)
 - Can you remember how it made you feel?

E. Immediately following the NHS Health Check

*I would like to ask you about what happened **just after** the appointment*

- How did you feel in the day or so after you had attended your NHS Health Check appointment, before you received any results?
 - Was the appointment what you expected?
 - If no, could you say what you had expected to happen
 - Were you worried about what you had been told or what had happened during the appointment ?
 - If yes, could you say what you were worried about and why?
- Did you actually make any changes (stop smoking, change diet, take more exercise) straight after the appointment?
 - If yes, have you managed to maintain those changes?
- If you were given advice/information did it help you to make any immediate changes to your lifestyle (stop smoking, change diet, take more exercise?)
 - If yes could you say what was helpful
 - If no – could you say why?

F. Receiving your results

I would like to ask you about receiving the results of the tests made during the appointment.

- Roughly how long did you have to wait for your results?
- How were the results explained to you? (Letter, over the phone)
 - Were you told about your risk factors? (how was it given; traffic light, %)
 - Did you understand what they meant?
 - What did the results mean to you?
- Were the results what you expected? Did you understand what it meant?
 - How did this make you feel? (Frightened, not bothered,)

- Has being told your risks for developing cardiovascular disease affected you in any way?
 - If yes – could you say how?
 - Has knowing your level of risk helped you make any changes to your lifestyle?
 - If yes, could you say what ; change diet, stop smoking or avoid exercise
 - If no, could you say why ? Too difficult, don't know where to start, haven't had time
- Has this affected people close to you?
- Have you talked to a health professional about the results?
 - If yes, could you say who (GP/Practice Nurse)
 - Was this helpful? (Reduce worry, made it clearer)

F. Improvements to the NHS Health Check Programme

Can you suggest any changes to the NHS Health Check appointment process that might improve it

- Could we improve the NHS Health Check ?
 - If yes could you say how?
 - Better information before the appointment
 - More or better explanation at the time of the appointment or when the results are given
 - More support for making lifestyle changes
 - Help to deal with any worries
- Could we improve the way the results are given?
 - If yes could you say how?
- Is there anything else you would like to tell me about your experiences of the NHS Health Check?

Thank you for taking part in this interview.

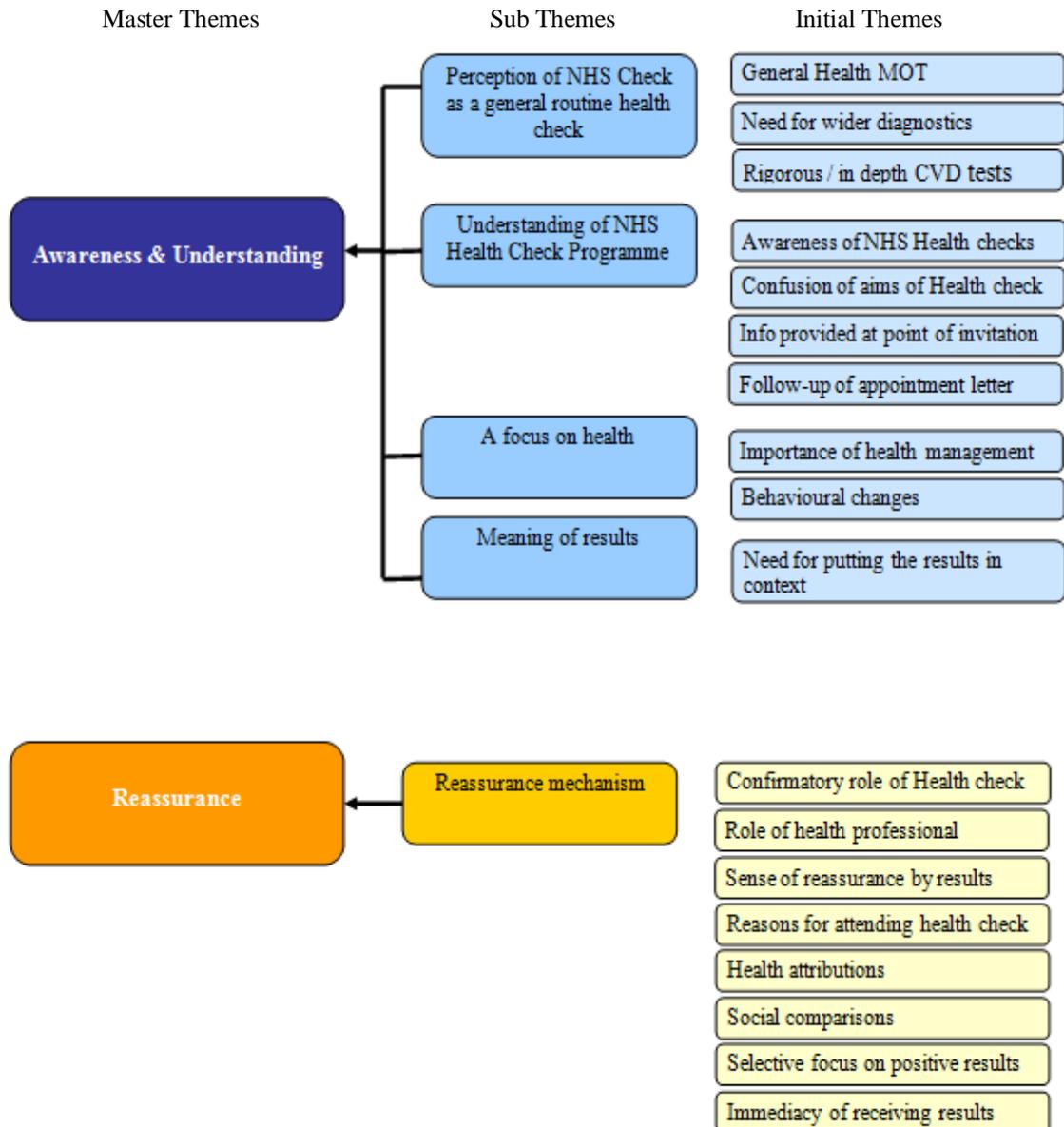
Once we have completed the interviews we will be sending a summary of the results to everyone who has taken part and we would be very grateful for any comments you might have. Can I just check that you would be happy for us to do this?

Appendix B

Diagrammatic representation of themes

IPA identified two master themes; 1) understanding and awareness, which had four sub-themes and 2) reassurance which had a single sub-theme.

Diagrammatic representation of master themes, sub-themes & initial themes



Appendix C

Full analysis and description of sub-themes

Perception of NHS Health Check as a general routine health check: Many participants were not aware that the health check was specifically a CVD health screen, with the majority stating; *“it’s like an MOT”* or a *“general health check”*. Other participants discussed their perceptions of the Health Check in more depth; *“I may have just assumed that they would test you for everything. (I thought) it was going to be a good overhaul, you know overall body check for everything”*. It is fair to say that the majority perceived the NHS Health Check to be a quick check to see if everything was ok *“an overall body check”* (hence the references made to an MOT), rather than an assessment of risk or an opportunity to review health and lifestyle behaviours. Specific comments included:

- *“I did say to her did you take a PSA test? And she said it wasn’t included in the health check you know. I thought they had tested me for prostate cancer”*
- *“Maybe it was just me expecting more from the appointment not just the cardiovascular bit. As a health check I thought they might have asked if we’ve got any concerns about our health for them to sort out”*
- *“I just assumed that they would test you for everything when you were there. It may not have said that it was going to but my perception of reading through things was that, it was going to be an overall body check, so I don’t think it was as in-depth as I thought it was going to be”*.
- *I actually thought I was going to be tested for Diabetes as well. I think maybe because I came up as low risk for the most things that’s why I wasn’t. If I’d been a higher risk, but I’d assumed that I might be tested for things like that”*
- *“I felt that the screen could have been a lot more thorough, I felt it was a bit of a waste of time to focus on one particular aspect, I thought it would have been better to have had a wider screen. Why spend that much time, the time could have been better utilized really”*
- *“I thought it would have included more things than just your blood pressure, cholesterol and diet. I was a bit disillusioned because I was expecting that bit more from it”*

The majority of the participants described how they had expected their health check to be longer and more in depth. Two participants described how they had expected more detailed testing from CVD screen: *“I just walked out thinking that to a degree it was skating on the surface and should have gone a bit deeper. I expected more, and I think my perception is that you need to do more to determine whether I’ve got a weak heart, a strong heart, whether it’s prone to disease and da did a di daa really. If I’d ended up you know having a few wires on a running machine having to do a few*

exercises to assess the impact, well that's what I had anticipated": "I thought it would be an exercise test, you know, being cardiovascular. I thought I would be operating on a treadmill and I thought it would be, take you exercising, your pulse ratings while exercising still and what have you"

All of the participants described how they felt that the health check would benefit from being expanded to include further screening tests which included a "well woman check", a "cancer screen" and a "diabetes check". A large proportion described their ideas about how the health check should be broadened. Specific comments included

- It was all geared to do with the heart. There is one test that I wish could be incorporated and that is ovarian cancer. I think that would be something that maybe could be thought about"

- Seen as it (health check) was aimed at women of a certain age I thought they might have asked me about menopause as well and menopause symptoms and maybe check your hormone levels, and maybe some advice on coping with that. Like a 'well woman clinic'. I think this would be a better health check"

Understanding of NHS Health Check Programme: The majority of participants included in this sample were not aware of the NHS health check programme prior to receiving their appointment letter; *"I'd never heard anything about it at all"*.

One participant explained how she was familiar with the programme, however it became apparent in the interview that the participant was not actually familiar with the health check programme and was confusing annual checks regarding blood pressure and cholesterol with the NHS Health check. Other participants described they had initially confused their health check appointment with other health appointments; *"I had a few problems with blood pressure so they kind of kept a check on me, so I thought it was something to do with that", "I'd actually had an operation in the October before, and I thought it was all relating to that"*.

All participants were invited to attend the NHS Health Check by a letter; *"they sent a letter in the post (unsolicited) asking me to make an appointment"* and *"it just said we are trying to get people to come between this age group"*. Some participants could not recall, however the majority claimed the letter was sent from their GP.

It would seem that participants had a range of experiences in terms of how much information they recalled receiving about their appointment at the point of invitation. Despite receiving an invitation letter in the post, only two participants could recall receiving specific information (a leaflet) about what to expect from their NHS Health Check;

- *"I had a leaflet which explained the procedures and what was going to happen. It was very comprehensive as to what was going to happen and why so I couldn't fault that to be honest"*
- *"I received a booklet in with it (appointment letter) that explained exactly what they were doing and why they were doing it"*

The majority of participants were unable to recall receiving any additional information with their appointment letter. When asked whether more information regarding the NHS Health Check would have been useful to them, the majority of participants claimed that it would and highlighted the need for more detailed information at invitation: *“I’m quite sure I didn’t get a leaflet in the beginning or something that explained why I’d been invited and what the benefits to me were, I mean I naturally saw them so I went, but it did occur to me that could have possibly helped a lot of people go”*

One participant highlighted receiving a follow-up telephone call following the appointment letter to book an appointment. She explained how the follow up call had been helpful in encouraging her to attend their appointment; *“The letter came for this check and it was followed up by a phone call. I mean, I wasn’t, I hadn’t decided not to do it, it was the letters were just in a huge pile of papers that always seem to be needed to be dealt with and eventually I would have thought, oh I’ve had that letter for 3 months, oh I’ll just leave it now. So the fact that it was followed up by a phone call, that was what made me take it....if it wasn’t for the call it would probably still be in the pile waiting to be dealt with”*

For the majority of participants, their NHS Health Check took place at their GP surgery and for other participants their appointment was at a local primary care centre. All participants were happy with the location of their appointment. For the majority of participants, a practice nurse or healthcare assistant carried out the NHS Health Check and this experience was highly rated; *“she was very educated and answered all my questions. Trained for the job”*.

A focus on health: Participants described how receiving their results had impacted on their health. Many of them commented how the experience of the health screen had prompted them to think about their health and their lifestyle and diet. Some participants described how attending their health check appointment had *“brought [their] health back into focus”* and *“underlined the importance of looking after health”*.

Specific comments included:

-“It brings it to the forefront that health is important”

-“I’ve been thinking about is junk things that you tend to eat. My wife, she always puts the extra potato on my dinner but now I say to her to put it on hers.”

-“It’s made me realise I’ve got to start doing something, lose weight, quit smoking, I know I’m at risk of you know having a heart attack or high blood pressure”

- “I could probably do with eating a bit more oily fish like salmon. I’m aware of that but I was before, it (health check) just adds focus really. I think that’s the thing to say it brings your health back into focus”

-“I didn’t tell me anything I didn’t already know, but I suppose going back and reading, re-reading things, it underlines the bad habits that you get into doesn’t it”

It seemed that for many of participants, attending their health check and had heightened their awareness of the need to look after their health. Many of them

attributed this to the advice and information they had been given in their appointment. However, the researcher noted that several of the participants had recently had awareness heightened because of illness in the family or other health problems of their own.

Participants were asked whether attending the health check appointment had led to any changes in their diet or life styles. Two participants described how they had made changes to their diet as a result of the advice and guidance which they had been given at their appointment, *"I don't eat enough fruit. I've changed that in the last 5 weeks. I've introduced orange juice every morning plus I eat fruit everyday now"*: *"I changed my diet, I eat a lot of stir fry's and I use olive oil to cook them but I read in the leaflet that you should use something like a nut oil, so that's what I do now"*. However the majority did not report any behavioural changes and felt that the main benefit had been an increased awareness.

Meaning of Results: Participants described a range of experiences in receiving their results. Some participants explained how they had received a written summary or print out of their results, whilst others described how they had had their results explained verbally.

The majority of the sample were unable to recall receiving written results, and said that they had received them verbally. Whilst one participant indicated feeling content with this method: *"She didn't write anything down, she explained my results to me and that was fine for me"*, others indicated they would have preferred written results.

There was a marked agreement amongst the sample that receiving results in writing, such as a print out, was more beneficial. Several participants highlighted that they had expected to receive a formal written letter containing their results following their appointment. One participant indicated how receiving results may prompt action *"the results should be sent to you in a letter, and then you can act on them that way"*.

A large proportion of the participants stated that they would have preferred to have received a letter. Two participants described why they felt a letter would be useful: *"It might be an idea to do a letter saying thank you for attending, these are your results: bish, bash, bosh. I just think sometimes when it comes in writing, it has that impact doesn't it?"*; *"I think if it comes in writing it's that extra a) confirmation or b) shock to do something"*.

The researchers noted that the idea of receiving a formal written letter seemed to offer participants more reassurance about their results because *"it's more concrete when it's in writing"*.

The majority of participants described some uncertainty about how to interpret their results. Many of the participants highlighted the need to have their results put into context to enable them to understand. Several participants described their confusion as to how to interpret her results:

-"The conclusion was I have a 6% chance of getting heart disease, which on one hand sounds good because 6 people out of one hundred, but then if I'm one of those 6...so I feel very unclear about it. As I say, I ended up with a 6% chance of having a heart attack so my first reaction was oh good, but then my daughter said oooo our GP's look at it when it's getting near 10 and I thought well how close to 10 is 6 so , you know...is 6 percent good?"

-“I didn’t know what 5.8 meant, whether it was high or low, well I knew it was high but I didn’t know to what degree or whether it was anything to worry about or not really. I’ve still got no idea what it means”.

-“I think the results could have been explained a bit clearer. It was nice having the sheet to bring home. On the computer it’s colour coded and highlighted but of course the one you get is just shades of grey so when you take it home you don’t know which ones are highlighted as red, green or amber. Maybe you could highlight it with a pen yourself to see where about you are in comparison”.

Many other participants highlighted the need for their results to be put into context to enable them to understand: *“I am thinking that 5.0 is very good for my cholesterol but I don’t know how close it is to being good or how close it is to being bad unless somebody puts it in to context and tells me exactly where it fits...yeah being more specific about the results and saying where they fit on a comparison line”* For some participants this involved being given written results and information, or for others this involved making social comparisons to similar others, whilst some participants were keen to know how their results compared to the general average.

Reassurance mechanism: The researchers asked the participants to cite the primary reason they decided to attend the NHS Health Check. They described a number of different reasons for attending their appointment. In the main, reasons focused on ensuring they were in good health and getting ‘checked’. Researchers noted that this was also linked to the age of participants, as many stated attending *“now I’m fifty”* or now *“I’m in my sixties”*.

Specific comments included:

- *“When you get to my age it’s important to be interested in your health you know”*
- *“My body isn’t as young as it used to be so I need to look after it”*
- *“At my age it’s good to take the opportunity for a health check”*

- *“I mean particularly when you’re getting older it’s not a bad thing to have checks now and again because the old works don’t work so well as they used to when they were young”*

A small number of participants had more specific reasons for attending their NHS Health Check, such as the recent loss of a family member; *“The reason I did take it up to be honest is that I just lost my sister and my Mother to Cancer within two months of each other and that’s one of the reasons I thought I’ve got to start looking after myself”* or awareness of a family history of CVD; *“both my mother and my aunt had heart problems so I wanted to double check everything and that I’m doing okay”*

A pattern emerged through the data whereby many participants attended their health check to check and confirm that they were in good health. They described how they had taken up their health check appointment to *“make sure that they were ok”* or to *“underline that everything was fine”*.

- *“possibly part of the driving force to go was the intrigue to know that I am alright, like a reassurance thing”*
- *“I just really wanted it confirmed that everything I was doing was the right thing to do”*

The researchers noted that for many of the participants the health check appointment had a confirmatory role in that participants interpreted their results as confirmation that they were free from CVD.

Interestingly, it wasn't just participants' results which had reassured them. Several of the participants described how the health professional facilitating the health check had contributed to their reassurance; *“There was no concern there from her to concern me”*; *“she gave me the impression that it was okay, so I thought I don't have much to worry about”*

All participants had received their health check results immediately at the end of their health screen. This was viewed as highly positive by the sample. One participant explained how receiving his results quickly had prevented him from worrying; *“I think as an outcome having those, answers, as before you left is a good thing. You know I can imagine if you went away and you waited for two weeks the longer that time goes on you know the little, negative thoughts in your mind have time to grow and, you know all of a sudden you've convinced yourself that something is far worse than it really is”*

The researchers noted that participants seemed to value the immediacy of receiving their results because they explained how it had given them immediate reassurance that nothing was wrong with their health.