Perceptions of health professionals involved in the implementation of a NHS Health Check care pathway in the primary care setting.

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Abstract

Background:

The national NHS Health Check programme in England aims to help people stay well for longer and is designed to support individuals aged between 40 and 74 to manage their

risk of developing vascular diseases by offering a cardiovascular risk assessment every five years.

Aim:

To investigate health professionals' experiences and perspectives concerning the implementation of a local HC programme and challenges to delivery.

Methods:

Surveys including standardised quantitative questions and qualitative questions were administered to GP practice staff (n = 25) directly involved in the implementation of Health Checks within a single county in the South West of England.

Results:

There was a lack of clarity concerning the expectations for Health Checks and barriers to consistently implementing the pathway. Practitioners were not always confident in communicating risk or supporting change in patient health behaviours.

Conclusions:

There is a need for on-going training and support in respect of Health Checks for those engaged in its implementation.

Introduction

The National Health Service (NHS) in England launched the NHS Health Check (HC) programme in April 2009 with the aim to support individuals aged between 40 and 74 to manage their risk of developing vascular diseases by identifying cardiovascular disease (CVD) (Department of Health, 2009). A key objective of the programme is to identify people aged between 40 and 74 years old at risk of, or living with undiagnosed CVD (diabetes, stroke, chronic kidney disease). Health Checks are designed to triage patients according to their CVD risk in order to establish appropriate treatment pathways if required. Challenges to patient uptake of HCs and similar primary care screening and prevention programmes include variations in assessment and treatment follow up, links to wider lifestyle services, and staff training (Graley *et al*., 2011; Hipwell *et al*., 2014; Nicholas *et al*., 2012). These have underlined the importance of staff training for example, in taking anthropometric measurements (i.e. quantitative measurements to assess the size, shape and composition of patients), and providing lifestyle advice (McNaughton *et al*., 2011). While evidence is emerging concerning patient perceptions of HCs (Baker *et al*., 2015; Burgess *et al*., 2014; Ellis *et al*., 2015; Ismail & Atkin, 2015; Jenkinson *et al*., 2015), there is a lack of evidence concerning health professionals' experiences and perspectives of the programme. The aim of this study was to investigate health professionals' experiences and perspectives concerning the implementation of a local HC programme and challenges to delivery.

NHS Gloucestershire Health Checks

The Gloucestershire HCs programme commenced in 2010 and is overseen by Public Health NHS Gloucestershire. A Gloucestershire HC care pathway (Figure 1) was agreed with local GP CVD leads in which all participating practices (n= 83) nominated a lead GP and lead Practice Nurse. The role of the Lead was to undergo HC training in order to provide consistency in terms of knowledge and procedures across the practice cohort. The pathway was underpinned by the Primary and Community Care Audit Group (PCCAG) administration template and was designed to triage patients according to their CVD risk via a staged invitation process. Gloucestershire HCs included a comprehensive support service for practice staff which included: MIQUEST queries (a system that facilitates the extraction of data from different types of general practice systems); sample invite templates; protocol for CVD risk assessment, and patient information cards. All Gloucestershire HCs were delivered within GP practices during the period covered by this study. A first stage risk assessment appointment including blood pressure, body mass index and smoking status is used to calculate patients' CVD risk score using QRISK, therisk of having a heart attack or stroke over the next 10 years (ClinRisk, 2014). High risk patients (CVD risk score ≥20%) are invited for a second appointment to confirm whether a CVD diagnosis was required and to be placed onto the risk register for appropriate management including drug therapy and signposting to lifestyle services. Discretionary follow up appointments are offered to lower risk patients (≤19% risk).

[Figure 1 here]

Methods

Participants and data collection

Participants (n = 25) were General Practice staff directly involved in the programme implementation either through conducting assessments with patients or managing staff. Participants were identified randomly via the County Medical List to ensure geographic spread. Adopting a mixed methods approach, a standardised survey (Figure 2) was devised in consultation with the HC Commissioner based on the HC care pathway and a review of the literature. This included four main themes. The first theme assessed method of patient identification and invitation. Three further included assessment and referral protocols, implementation and impact of HCs, and areas for improvement. The survey was administered via telephone by a single researcher which provided an opportunity to elicit qualitative data for example, what worked well, in addition to responses to the quantitative questions. Quantitative questions included dichotomous (two possible responses), and Likert-type questions (responses ranging between 1 to 5, 5 indicating more agreement). Data collection was supported with an online survey tool to aid data capture, retrieval and analysis.

[Figure 2 here]

Data analyses

Descriptive analyses were run on quantitative data to compute mean item scores. Qualitative data were recorded and transcribed verbatim in order to ensure accuracy. The qualitative software package NVIVO 9 was used to manage and organise the qualitative data and facilitate deductive thematic analysis (Gale *et al*., 2013). This involved systematically coding sections of text into broad descriptive themes followed by deeper

analysis to identify sub themes that helped unpack participant data. The creation of a coded matrix facilitated the renaming of participants as soon as they were included in the research and facilitated the inclusion in the text of participants' quotations via a code according to their role, sequence in the interview process, and their location according for example, PM_5/1 (Practice Manager, the 5th interviewed, District 1).

Ethical approval

Ethical compliance was approved by the University of Gloucestershire research ethics committee.

Results

Participant profile

In total, 42 GP surgeries were contacted from which 25 participants were interviewed between May and July, 2012, representing 30.1% of the total number of surgeries implementing HCs. Respondents from GP surgeries included GPs (GP, n = 2), Practice Managers (PM, n = 14), Practice Nurses (PN, n = 6) Health Care Assistants (HCA, n = 2) and an administrator. Results are presented in a combined narrative according to the themes outlined in the analytic framework and sub themes that emerged through data analysis.

Theme 1: Method of patient identification and invitation by practices

The first sub theme, flexibility, highlighted that practices were able to employ a range of approaches for inviting patients; '*we're working in descending order*' [PM_7/3], and; '*we work on an alphabetical approach based on the search results*' [HCA_1/1]. Opportunistic approaches were encouraged by commissioners and were undertaken by 70 per cent of practice respondents; '*we identify patients when attending for other appointments*' [PM_4/1], and; '*we review new patient checks, chronic disease management patients and INPS clinical system*' [PM_13/2]. One participant highlighted that they had merged existing practice processes with the HC care pathway; '*there was a similar in-house system established before NHS HC which meant a number of patients had already been scored. Following this we now select invitees based on their* [CVD] *risk score*' [GP_2/3].

The second sub theme, implementation inconsistency, related to potential management issues and limited understanding of the pathway. This meant it was not always possible to identify patients due to a lack of information collected by the practice prior to the appointment; '*a lot of patients do not fill out the* [pre-HC appointment] *questionnaires properly in order for us to pick them out*' [PN_4/1]. This highlighted that programme tools developed to aid the assessment process and reduce staff time were not necessarily being used to their full effect. A common view was that it was the 'worried wells' who tended to be most interested in the HCs; '*we tend to have patients who show an interest in their health and so see them quite a lot, especially ones with existing chronic diseases*' [PN_2/1]. Here, the difficulty in engaging patients who were potentially able to receive the most benefit from a HC rather than those who frequently or routinely attended their surgery was evident. In response, practices periodically reviewed the non-responder list and reissued HC invites although we were not able to assess the success of this approach.

Theme 2: Assessment and referral protocols

The first sub theme, embedding procedures, related to the way in which key elements of the HC pathway were being utilised for example, laboratory services. Laboratory services (91.3%, n = 23) were most frequently used while Near Patient Testing (54.2%, n = 13) was the least used. Near Patient Testing during the period this study covers was not commissioned and its use suggested contrasting levels of understanding of the HC pathway between, or within, practices. Practices were most confident in first appointments (pre assessment blood tests, *Mean* = 4.12, *SD* = .60), invitations (*Mean* = 4.04, *SD* = .79) and laboratory tests (*Mean* = 4.04, *SD* = .79), but less confident in second appointments (CVD risk assessment, *Mean* = 3.52, *SD* = 1.3), risk communication (*Mean* = 2.68, *SD* = .1.8) and changing behaviours (*Mean* = 2.44, *SD* = 1.6). This suggested HCs were still being embedded into practice and that there was a need for further training and support.

The second sub theme, lack of connectivity, related to the notion that HCs and wider referral services were not well aligned. The majority of participants (83.3%, n = 20) were confident that patients referred for lifestyle services had received the service but there were mixed opinions concerning the quality of services. While Health Trainers were rated highly (*Mean* = 4.13, *SD* = .83) responses were low (n = 8), and some participants were not aware of what Health Trainers were. Smoking cessation was rated most highly (*Mean* = 4.43, *SD* = .59) although this was commonly provided in-house, thus potentially biasing the data. Weight management (*Mean* = 3.76, *SD* = .90) and alcohol services (*Mean* =

3.76, *SD* = .90) were the least rated services although it should be noted that coordinated weight management services were not well developed at this time.

Theme 3: Implementation and impact of Health Checks

The first sub theme, workloads, highlighted the perceived impact of HCs on day to day activities. The majority of practice staff (96%) estimated that between 1% and 25% of their job involved HCs suggesting variation in the way the implementation of the programme impacted practices. Approximately 40% of participants indicated that there had been issues with staffing levels, some attributing these issues to the extra workload created by HCs: '*NHS Health Check generates a huge workload for our staff in addition to what we do, a roughly 20 per cent additional workload*' [PN_3/4], and; '*Health Check has generated a lot of extra work for the practice*' [PM_3/2]. It was clear that there was variation in the perceived extent to which HCs had created additional pressures on staffing; '*Health Check does place additional pressure on the team when patients respond to invites as we are only a small practice*' [PM_6/2] for which flexible appointments and additional time for follow ups was recognised as important.

The second sub theme, ambivalence, related to the mix of perceptions concerning the overall impact of the HC programme. While the majority of participants (72%, n = 18) perceived that HCs were useful in early detection and the time to discuss patient health and lifestyles, there was caution concerning the programme's overall effectives; '*…it's hard to decipher the effects and I'm not convinced at a practice level but county-wide it might well be working. Perhaps we could investigate emergency admissions related to CVD conditions…*' [PM_7/3].

Theme 4: Areas for improvement

The first theme, diversity, referred to the delivery of HCs in a wider range of settings were commonly perceived as a potential area for improvement; '*I think workplace visits would be a really good way of enhancing how we deliver the programme, we'd have a captive audience and could advertise visits in the media*' [PM_6/2]. The second sub theme, training and improved clarity, highlighted a need to support practice staff. More than two-thirds (70.8%) of practice staff indicated that they had training in CVD prevention and 44% (n = 11) indicated that they required further training, while it was felt that there was a need to promote programme more effectively; '*…it needs to be better promoted and marketed, including exactly what its purpose is and for whom, we need more clarity regarding the boundaries of HC and the quota of patients needed to be put through*' [PM_11/2].

Discussion

Research has underlined the importance of staff training with respect to addressing variations in interpretation and implementation of HCs (McNaughton *et al*., 2011). Although representing only one moment in time, the findings in the present study parallel other research assessing patient perceptions of HC where it is recognised that a greater understanding of the HC objectives and purpose of the programme is needed (Burgess *et al*., 2014). While the lack of Practice Nurses in the sample meant we were unable to assess these issues in greater detail for staff routinely conducting patient assessments it is apparent that health professionals might require further support to improve understanding and awareness of HCs. This might include communicating the relevance of the

programme and CVD risk profiling. While the transfer of knowledge within GP practices was not assessed which is a limitation of the study, it was likely that high staff turnover impacted how knowledge was transferred, leading to knowledge gaps.

Data in this study are at the individual level and the sample size is small which is a limitation because the findings cannot be generalised more widely or taken to represent an accurate account of programme implementation. Further, we were unable to assess whether responses would have been different had additional clinical staff been interviewed, although recruiting GPs to the study was challenging. This aside, adopting continuous approaches to knowledge development and transfer might usefully address the diversity in the way HCs are implemented (Nicholas *et al*., 2012) and improve confidence in HCs to deliver meaningful results although the complexity of the planning, systems and resources required to implement HCs is not underestimated. Knowledge updates might provide an initial step toward increasing staff confidence, skills and potential effectiveness of the HC programme. This might usefully be supported by routine local evaluations of HC implementation investing in and building positive relationships between practice staff and wider lifestyle services.

Conclusion

The findings suggest that the HC programme is still evolving. Challenges to successful implementation include a lack of clarity concerning the programme, potential lack of internal programme management, and contextual factors for example, staffing and staff training. There is a need for ongoing training and support which might include regular

knowledge updates, progress feedback, training in motivational interviewing and risk communication.

Key points

- There is a potential lack of clarity concerning the expectations for Health Checks and barriers to implementing the pathway consistently.

- Health professionals are not always confident in communicating risk or in supporting change in patient health behaviours.

- There is a need for ongoing training and support in respect of Health Checks for those directly engaged with its implementation.

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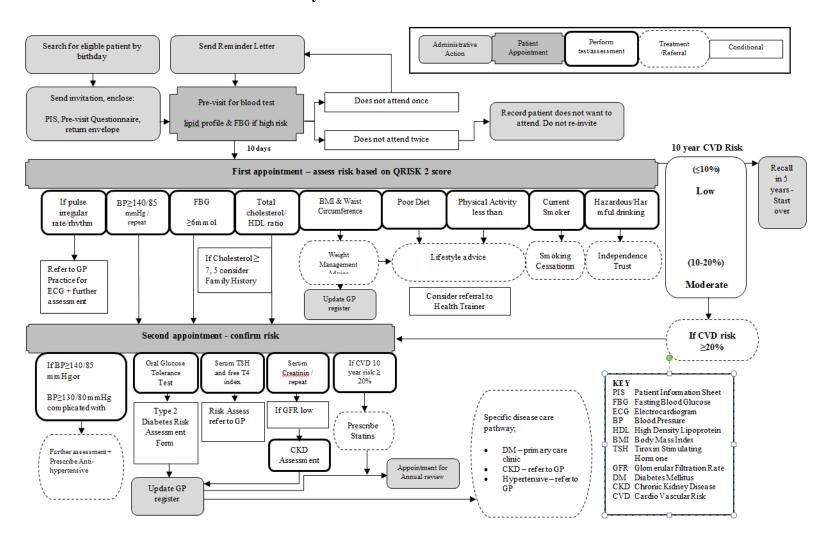Graley CE, May KF, McCoy DC (2011) Postcode lotteries in public health—the NHS Health Check programme in North West London. BMC Public Health 11:738 11:738 doi: 10.1186/1471-2458-11-738

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Figure 1: Gloucestershire NHS Health Checks Care Pathway


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┌─────────────────────────┐  ┌─────────────────────────┐      ┌──────────────────────────────────────────────────────────────────────────────────┐
│ Search for eligible     │  │ Send Reminder Letter    │      │ ┌──────────────┐ ┌──────────┐ ┌──────────┐ ┌───────────┐ ┌──────────────┐          │
│ patient by birthday     │  │                         │      │ │Administrative│ │ Patient  │ │ Perform  │ │ Treatment │ │ Conditional  │          │
└─────────────────────────┘  └─────────────────────────┘      │ │   Action     │ │Appointment│ │test/     │ │ /Referral │ │              │          │
                                                              │ └──────────────┘ └──────────┘ │assessment│ └───────────┘ └──────────────┘          │
                                                              │                               └──────────┘                                          │
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Search for eligible patient by birthday

Send Reminder Letter

| Administrative Action | Patient Appointment | Perform test/assessment | Treatment /Referral | Conditional |

Send invitation, enclose:
PIS, Pre-visit Questionnaire, return envelope

Pre-visit for blood test lipid profile & FBG if high risk

Does not attend once

Does not attend twice

Record patient does not want to attend. Do not re-invite

10 days

First appointment – assess risk based on QRISK 2 score

10 year CVD Risk

(≤10%) **Low**

Recall in 5 years - Start over

- If pulse irregular rate/rhythm
- BP≥140/85 mmHg / repeat
- FBG ≥6mmol
- Total cholesterol/ HDL ratio
- BMI & Waist Circumference
- Poor Diet
- Physical Activity less than
- Current Smoker
- Hazardous/Harmful drinking

Refer to GP Practice for ECG + further assessment

If Cholesterol ≥ 7, 5 consider Family History

Weight Management Advice

Lifestyle advice

Smoking Cessationn

Independence Trust

(10-20%) **Moderate**

Update GP register

Consider referral to Health Trainer

Second appointment - confirm risk

If CVD risk ≥20%

If BP≥140/85 mmHg or BP≥130/80 mmHg complicated with

Oral Glucose Tolerance Test

Serum TSH and free T4 index

Serum Creatinin / repeat

If CVD 10 year risk ≥ 20%

Further assessment + Prescribe Anti-hypertensive

Type 2 Diabetes Risk Assessment Form

Risk Assess refer to GP

If GFR low

Prescribe Statins

Specific disease care pathway;
- DM – primary care clinic
- CKD – refer to GP
- Hypertensive – refer to GP

CKD Assessment

Update GP register

Appointment for Annual review

KEY
PIS	Patient Information Sheet
FBG	Fasting Blood Glucose
ECG	Electrocardiogram
BP	Blood Pressure
HDL	High Density Lipoprotein
BMI	Body Mass Index
TSH	Tiroxin Stimulating Hormone
GFR	Glomerular Filtration Rate
DM	Diabetes Mellitus
CKD	Chronic Kidney Disease
CVD	Cardio Vascular Risk

Figure 2: Data collection tool

NHS Health Check – Practice Data Collection Tool

(answer **Y** for **YES** and **N** for **NO** and give comments if applicable).

1. What is your role?_____

2. How much of your job involves Health Checks?
      0% ☐   1-25% ☐   26-50% ☐   51-75% ☐   76-100% ☐

3. How long have you been involved in NHS Health Checks?_____

4. How well is your practice doing at delivering the NHS Health Check? Score between 1-5, where 1 means poor and 5 means excellent. Give comments if necessary.

	Score(1-5)
A. Invitation (call and recall)	
B. Laboratory tests	
C. First appointments (risk assessment)	
D. Risk communication	
E. Changing behaviours	
F. Second appointments (including follow-ups)	

Comments:_____
_____

5. What equipment do you use currently to do the Health Checks? **Y/N**		**Do you have any issues with the equipment? Please comment**
Electronic BP monitor		
NPT		
Lab		
Vital Signs Equipment		
Waist measurement tape		
Other (specify)...		

6. Have you experienced any issues with the risk calculator tool, Qrisk2?   Y/N ☐ If yes, please comment_____

7. Have the patients that you have referred for lifestyle service received that service? Y/N ☐

        A. Do you record this? **Y/N** ☐
        B. If yes, where

_____

8. How do you rate your local health lifestyle service provision?
Score between 1-5, where 1 means poor and 5 means excellent. Give comments if necessary.

	Score (1-5)	Who is your provider?
A. Weight management		
B. Smoking Cessation		
C. Alcohol (Independence Trust)		
D. Health Trainer		
E. Other (i.e. local authority services)		

8. Did you have any training in CVD prevention? Y/N ☐
 A. Do you require any further training? Y/N ☐
If yes, in what area?_____

10. Have you had any issues with staffing levels? Y/N ☐
        A. If yes, how has this impacted on your plans?
Comment_____

11. Do you have a CVD GP lead in your practice? Y/N ☐

12. How do you decide who to invite for Health Checks?

Do you use the following strategies?	Y/N	Comments
A. Random invitations?		
B. Most at risk first?		
C. Age?		
D. Opportunistic invitations?		
E. Other?		

13. Do you think this programme is preventing premature CVD? Y/N ☐
Why? _____

14. What do you think works well?_____

_____

15. **Are there any other ways we can improve the programme?   Y/N □ Comments**
_____
_____
_____

16. Have you encountered any problems with regard to the NHS Health Check data quality?   Y/N □

     Read Coding □
     Running of MIQUEST Queries □
     System Reports □
     Other □ **Please** specify _____

17. **Any other comments based on the responses**