

# Telephone outreach by community workers to improve uptake of NHS Health Checks in more deprived localities and minority ethnic groups: a qualitative investigation of implementation

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## Abstract

**Background:** NHS Health Checks is a national cardiovascular risk assessment and management programme in England. To improve equity of uptake in more deprived, and Black, Asian and minority ethnic (BAME) communities, a novel telephone outreach intervention was developed. The outreach call included an invitation to an NHS Health Check appointment, lifestyle questions, and signposting to lifestyle services. We examined the experiences of staff delivering the intervention.

**Methods:** Thematic analysis of semi-structured interviews with 10 community Telephone Outreach Workers (TOWs) making outreach calls, and 5 Primary Care Practice (PCP) staff they liaised with. Normalisation Process Theory was used to examine intervention implementation.

**Results:** Telephone outreach was perceived as effective in engaging patients in NHS Health Checks and could reduce related administration burdens on PCPs. Successful implementation was dependent on support from participating PCPs, and tensions between the intervention and other PCP priorities were identified. Some PCP staff lacked clarity regarding the intervention aim and this could reduce the potential to capitalise on TOWs' specialist skills.

**Conclusions:** To maximise the potential of telephone outreach to impact equity, purposeful recruitment and training of TOWs is vital, along with support and integration of TOWs, and the telephone outreach intervention, in participating PCPs.

**Keywords:** NHS Health Checks, Telephone Outreach, Deprivation, Ethnicity, Normalisation Process theory, Implementation, Qualitative

## Introduction

The National Health Service (NHS) Health Check programme was established to prevent cardiovascular disease (CVD) and reduce health inequalities(1)(1) across England. Patients aged 40-74, not on relevant disease registers, are invited every 5 years for an NHS Health Check to assess, and where possible modify, their risk factors for CVD – both physiological (e.g. high blood pressure, cholesterol) and behavioural (e.g. smoking, diet, exercise, alcohol). Primary Care practices (PCPs) are currently the main providers of NHS Health Checks.

Concerns have been raised that NHS Health Checks may increase rather than redress health inequalities(2, 3), as those in more deprived communities who could benefit most might not attend due to social and structural barriers(4, 5). However research shows that coverage is consistently higher in deprived populations(6-10). This is thought to reflect targeting, as those from the least deprived areas are more likely to take up invitations(11-14). However, language and cultural issues are perceived by PCP staff to be additional potential barriers amongst Black, Asian and minority ethnic (BAME) communities(15). Interventions such as telephone invitations(8, 12), and involvement of community workers(8, 16, 17) may increase uptake amongst more deprived or BAME communities.

A novel telephone outreach intervention was developed in Bristol with the aim of improving uptake of NHS Health Checks among more deprived, and BAME communities where risk of CVD is higher(18-20), and where evidence suggests patients are less likely to respond to a letter invitation(8). The telephone outreach intervention was led by a Local Authority public health commissioner who oversaw the recruitment and training of community outreach workers or interpreting service staff who were community residents. The Telephone Outreach Workers (TOWs) called patients to inform them about NHS Health Checks and invite them to attend an appointment, in ten PCPs. If the invitation was accepted, the NHS Health Check lifestyle questions were completed over the phone and, if appropriate, patients received signposting to lifestyle services (e.g. weight management/smoking cessation). Where possible, the outreach caller's cultural background and main language was matched with that of the patient called.

We investigated the experiences of community TOWs and PCP staff involved in delivering this telephone outreach intervention with more deprived and BAME communities to understand the social processes that influenced the implementation of the intervention. The perspectives of patients who were contacted by TOWs, and the results of a quantitative evaluation, are reported separately(12, 21).

## Methods

### **Participants:**

Semi-structured interviews were conducted with TOWs delivering the telephone outreach intervention for 10 PCPs in Bristol, England. All TOWs worked across 1-3 PCPs. They were recruited to the study via an intervention training meeting. To contextualise the findings, a purposive sample of PCP staff from participating practices were also recruited, either at meetings regarding the intervention, or by invitation email. Each TOW worked with one of these PCP staff.

### **Data collection:**

Most interviews took place at the participant's place of work; two were conducted by telephone. Interviews were conducted by a non-clinical researcher (TS) and lasted 15-50 minutes. A topic guide was used to focus the interviews, whilst allowing participants to raise topics not covered by the guide. The topic guide was informed by a review of relevant literature and suggestions from our multi-professional study team, and modified as data analysis progressed. Topics included: understanding of/attitudes towards, NHS Health Checks and telephone outreach; training; experiences of telephone outreach calls/logistics; communication style; perceived patient acceptability; and suggested improvements.

### **Data analysis:**

With informed consent, interviews were audio-recorded, transcribed, imported into NVivo10 and analysed using thematic analysis(22). Analysis began alongside data collection, with ideas from early analysis informing later data collection. Analysis commenced with open coding grounded in the data, generating an initial coding framework, which was added to/refined as new data were gathered. The first four TOW transcripts were double-coded by TS and JH, and all PCP transcripts by TS and EB. Any non-concurrence was discussed and resolved. Codes were built into broader categories through comparison across transcripts and higher-level recurring themes were developed. The four constructs of Normalisation Process Theory (NPT) were used to further investigate developing themes across the dataset(23). NPT proposes that implementation of interventions is dependent on the ability of participants to fulfil four criteria 1. *Coherence* - Individuals' clarity regarding the purpose of the intervention. 2. *Cognitive participation* - work that individuals and organisations necessarily do in order to enroll individuals to engage with the intervention. 3. *Collective action* - the work that individuals must do to make the intervention function. 4. *Reflexive monitoring* – participants reflection or appraisal of the intervention(24).

The data, coding frameworks, and themes were discussed by the multi-disciplinary research team to ensure credibility and confirmability.

## Results

Fifteen interviews were conducted. All 10 TOWs (9 female) working across 10 PCPs, and 5 PCP staff (4 female) supporting the intervention with supervisory contact with the TOWs (practice managers, data managers and personal assistant) were interviewed. TOWs were from Somali (three), South Asian (three), Black British (two) and White British (two) ethnic groups. All TOWs spoke English fluently, and six had additional languages including Somali, Arabic, Urdu, Punjabi, Bengali and Hindi. PCPs' Indices of Multiple Deprivation by post code(25) ranged from first (four PCPs) or second (three PCPs) most deprived decile, to third, fourth and fifth most deprived decile (one PCP each).

PCP staff provided TOWs with patient lists from which to make calls, negotiated resources such as office space and computer access, and made appointment slots available for NHS Health Checks. One PCP staff participant also made telephone invitation calls for NHS Health Checks, without the lifestyle questions or signposting aspects involved in outreach calls. Themes developed from the analysis related to the four constructs of NPT, which are used to structure the description of our findings below, alongside verbatim quotes (see Tables I-IV). All names refer to pseudonyms, quoted participants were TOWs unless otherwise indicated.

### 1. **Coherence** (Table I)

TOWs demonstrated *coherence* in understanding the rationale of NHS Health Checks as preventing ill health in the future by encouraging lifestyle changes. *Coherence* was also evident between the intervention aim and the commitment of the individual TOWs to improving the health of their communities.

PCP staff demonstrated familiarity with the rationale of NHS Health Checks, however some PCP staff were not convinced that they should be a priority, citing competing priorities and a sense of uncertainty regarding benefits. Two PCP staff noted that uptake of NHS health checks at their practice was low, and saw the telephone outreach intervention as providing resources to help address this, while others reported a lack clarity regarding the intervention aim.

### 2. **Cognitive Participation** (Table II)

Recruitment targeted individuals with community knowledge/connections, skills such as language interpretation and patient advocacy or other relevant experience (e.g. alcohol addiction counselling/smoking cessation).

Training was offered on the purpose and content of NHS Health checks, the EMIS template (electronic patient record system used in the PCPs) used to record patient responses, and

motivational interviewing(26) to help resolve patients' ambivalence about behaviour change to encourage uptake of NHS health checks.

In two PCPs, delays in enabling access by TOWs to EMIS meant that the training was not reinforced by the opportunity to practice soon afterwards. Motivational interviewing training was well received by TOWs, with several participants reporting that it improved their confidence in conducting the outreach call, particularly with BAME groups where cultural and/or gender expectations made asking some of the lifestyle questions challenging.

PCP staff described having engaged with the telephone outreach intervention subsequent to an approach from the public health commissioner, or in one case, as a result of their positive relationship with a centre providing lifestyle services.

### 3. **Collective Action** (Table III)

Different types of work were required to make the intervention function. TOWs required PCPs to provide lists of patients to receive an outreach call, health check appointment slots, and appropriate facilities to make the calls and update records. In some practices a room to make outreach calls from was provided, while elsewhere TOWs reported not having access to a suitable space. TOWs in some cases reported problems with the timing, quantity or flexibility of the health check appointment slots, and used their knowledge of target communities to increase the accessibility of NHS Health Checks appointments. However, PCP staff described their need to balance demand for NHS Health Check appointments generated by the TOWs' calls with other claims on clinical staff time.

Varied approaches to producing lists of patients to receive an outreach call were reported; for example one PCP produced a list of patients residing in the most deprived areas served by the practice, whereas another simply used NHS Health Checks standard eligibility criteria. Once lists were generated by PCP staff, TOWs with interpreting skills sought to identify culturally matched patients from across the PCPs they served, but this required more comprehensive lists than some PCPs were providing.

In some PCPs the TOWs and their work were largely unknown to other PCP staff. This could create communication barriers, and contribute to logistical difficulties. Where the interview data suggested that TOWs were better integrated within the PCP, fewer problems were reported by both PCP and TOW participants in negotiating access to resources.

During the outreach calls, TOWs worked to establish trust to aid communication, and had individual and adaptive ways of doing this. TOWs described having a 'bit of banter' and sharing personal

experiences to establish rapport, and to aid being perceived as non-judgemental when asking lifestyle questions. Questions about alcohol consumption in particular could be culturally sensitive – in Muslim communities, or if seen as suggesting excessive consumption. Several TOWs reported feeling uncomfortable asking lifestyle questions, expected patients to be reluctant to disclose such information to them, and gave patients the option of answering the question in the face-to-face appointment.

Some TOWs reported drawing on the telephone outreach conversation, alongside any prior knowledge they had of the patient, to enable signposting to lifestyle services ahead of the NHS Health Checks appointment.

#### **4. Reflexive Monitoring** (Table IV)

Participants reflected on what facilitated or hindered the telephone outreach intervention, what constituted ‘success’, and the tensions inherent within that.

Recruitment of the right individuals to work as TOWs was seen as important by PCP staff, who highlighted attributes such as local knowledge, strong motivation and good telephone communication skills.

TOWs spoke about the importance of being supported by the PCPs they worked in, and also valued the information and feedback meetings for all TOWs, organised by the public health commissioners. Four of these took place in the first year of the intervention, and TOWs reported finding them helpful for sharing good practice, knowledge and encouragement.

PCP staff described how the intervention impacted on their practice. Positive impacts included a reduction in administrative burden relating to NHS Health Checks, and in a minority of PCPs, a reduction in the time required for an NHS Health Check appointment because the lifestyle questions had been completed by the TOW.

Some PCP staff questioned line management arrangements for TOWs - based in PCPs for the purposes of telephone outreach, but not employed by them – and perceived these arrangements as a barrier to resolving difficulties with implementation of the intervention.

When it came to measures of success, participants viewed the intervention as effective in prompting patients to attend an NHS Health Check. It was also seen by some participants as an effective way to signpost people to healthy lifestyle services (e.g. weight management), but not all participants making outreach calls agreed, feeling that they were not qualified to do this, or reporting that people called were unreceptive. Tensions arose regarding the perceived value of including NHS Health Checks lifestyle questions in the outreach call. While this had the potential to reduce the

time needed for the face-to-face appointment, the questions were generally repeated by clinical staff. TOWs saw the questions as potentially off-putting for patients, time-consuming, and some TOWs did not feel skilled/confident enough to engage in sensitive health conversations.

PCP staff noted that allocating staff time to NHS Health Checks appointments when outreach invitations were accepted had an opportunity cost in loss of other appointment capacity, and expressed doubts about the benefits of using PCP clinicians' time in this way.

## Discussion

### Main findings of this study

In order to implement telephone outreach, TOWs were purposefully recruited for their knowledge of local services, cultures and languages, and were provided with tailored training to deliver the intervention. They were recognised as skilled communicators with specialist knowledge of the target communities and therefore able to deliver valuable outreach, beyond what was feasible for PCP staff.

However, within PCPs where they were based when making outreach calls, TOWs were often relative outsiders. This contributed to communication barriers and logistical challenges in accessing the resources they needed to implement the intervention. PCP staff highlighted tensions between 'success' in booking more patients in for NHS Health Checks, and the demands these appointments placed on already stretched clinical resources. This highlights the double challenge of implementing an intervention with non-PCP staff to increase uptake in NHS Health Checks which may not be an immediate priority for PCPs. Some PCP staff expressed a lack of clarity in their understanding of targeting criteria for telephone outreach, and this could reduce the potential to capitalise on TOWs' specialist skills – for example by matching main language/cultural background with the patients called.

Telephone outreach was perceived by participants as effective in engaging patients in the NHS Health Check programme, and could reduce related administration burdens on PCPs. Completing the lifestyle questions from the NHS Health Check during the call was challenging and time-consuming, and in most PCPs the questions were repeated during the NHS Health Check appointment itself. However asking these questions could provide an opportunity for personalised signposting to healthy lifestyle services. While some TOWs were confident signposting, others did not feel qualified to carry out this role, or reported that patients were unreceptive.

### What is already known on this topic

Concerns have been expressed that NHS Health Checks may increase rather than redress health inequalities(2, 3). However research shows that coverage is consistently higher in deprived

populations(6-10). This may reflect targeting, as there is evidence that those from the least deprived areas are more likely to take up invitations(11-14). Reported coverage amongst different BAME groups is variable, but often comparable with or higher than in White British groups(14). Research with PCP staff found perceptions that BAME patients were less likely to attend, with language and institutional and socio-cultural barriers to accessing health care seen as major issues(15); and provides support for targeted outreach initiatives affording cultural awareness and sensitivity to the needs, values, and beliefs of the target population(5, 15, 27).

There is limited previous evidence that telephone invitations increase uptake of NHS Health Checks(8). The quantitative evaluation of the current telephone outreach intervention demonstrated that practices where telephone invitations were made by TOWs were more successful at attracting BAME patients to complete an NHS Health Check compared to standard letter or telephone invitations by PCP staff, but overall uptake was higher in the control group(12). Endorsement by community ambassadors/engagement workers, using language they understood and connected with, was reported by participants from BAME groups to be important in their decision to attend an NHS Health Check(16, 17).

Primary care providers of NHS Health Checks reported difficulties with implementation, including impact on workload, funding, and getting people to make lifestyle changes(4). While most patients reported receiving lifestyle advice during their NHS Health Check, many found this advice too brief or generic, and wanted more detailed and personalised information(14).

#### What this study adds

While there is broad support for targeting NHS Health Checks(5, 27), this study provides a unique contribution to the literature by examining the novelty of specialist TOWs, recognised as successful in engaging patients from deprived and BAME communities, delivering telephone outreach. The opportunity to facilitate closer communication based on familiarity with target communities could be an effective conduit for the use of telephone outreach for other healthcare interventions. Our findings demonstrate the importance of recruiting trusted and respected TOWs, with similar socio-cultural backgrounds to target communities, to capitalize on their local knowledge and status in the community(17, 28, 29). However further local negotiation on targeting is necessary to ensure TOWs' specialist skills are deployed in the most effective manner, by matching TOWs with suitable population groups to call.

In keeping with findings elsewhere(4), PCP participants reported workload and resource challenges with delivering NHS Health Checks. The telephone outreach intervention reduced the PCP administration burden, but some PCP participants were concerned about the clinical burden of

increasing NHS Health Check uptake, thus again local negotiation is necessary to find an acceptable balance. Intended reductions in NHS Health Check appointment times (due to completion of lifestyle questions by telephone) was only realised in a minority of practices, and TOWs reported that asking these questions was challenging.

With both PCP staff(4, 15, 30) and patients(14) reporting dissatisfaction with the lifestyle advice and signposting elements of NHS Health Checks in other studies, telephone outreach may provide an opportunity to deliver the more personalised aspects desired by patients, as well as the connection to local healthy lifestyle services reported as lacking by PCP staff(15, 30). Some TOWs reported not feeling qualified to carry out signposting; however others welcomed this role, and were recognised as having better knowledge of locally available lifestyle services than PCP staff, as well as having time, skills and motivation to engage personally with the patients they called. Future research should thus explore the feasibility of retaining signposting during the call in the absence of the prompt provided by formal lifestyle questions, and what further support TOWs would need to accomplish this.

The use of NPT allowed for examination of issues with both the design of the intervention and its implementation. Interview data indicated that the NPT constructs of *coherence* and *cognitive participation* were less well fulfilled for PCP staff than for TOW participants, with negative consequences for implementation.

#### Limitations of this study

While all TOWs were interviewed, we report only TOW accounts of the telephone calls. However patient accounts of the intervention are reported elsewhere(21). Although the intervention was implemented in a range of PCP, this was only in one geographical area and therefore this should be considered when interpreting our findings.

#### Conclusion

Telephone outreach employing TOWs from target communities has the potential to engage patients from BAME communities in the NHS Health Checks programme, as well as other healthy lifestyle services. To maximise this potential, purposeful recruitment and training of TOWs is important. Our findings suggest that it is equally important to actively support the integration of TOWs, and the telephone outreach intervention, in participating PCPs. PCPs valued the support provided by TOWs in implementing the NHS Health Checks programme, but local negotiation with PCPs on appropriate numbers of, and resources for, NHS Health Check appointments, and how to prioritise these in line with local health needs, is essential. Achieving the intended telephone outreach targeting in response to local needs at practice level can be challenging, and support with strategies to do this,

and ways to ensure a good match between the TOW support available and the patients to be called, should be provided to PCPs. A key finding of the study was that there was limited evidence of any logistical benefit from including NHS Health Checks lifestyle questions in the outreach call, but other personalised opportunities for signposting to lifestyle services during the call should be explored.

### Research ethics

The study was approved by the South West – Frenchay NHS research ethics committee (Ref:15/SW/0231), and University of Bristol Faculty of Health Sciences research ethics committee.

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### Conflicts of interest

AC and VH were involved in developing the telephone outreach intervention, however the evaluation was carried out independently by EB, TS and JH.

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### References

1. Public Health England. NHS Health Check Implementation Review and Action Plan. London: PHE; 2013.
2. Capewell S, Graham H. Will Cardiovascular Disease Prevention Widen Health Inequalities? *PLOS Medicine*. 2010;7(8):e1000320.
3. Royal College of General Practitioners. Response to Public Health England consultation on 'NHS Health Check programme: priorities for research'. In: Over Diagnosis Group, editor. 2014.
4. Mills K, Harte E, Martin A, MacLure C, Griffin SJ, Mant J, et al. Views of commissioners, managers and healthcare professionals on the NHS Health Check programme: a systematic review. *BMJ open*. 2017;7(11):e018606.
5. Nicholas JM, Burgess C, Dodhia H, Miller J, Fuller F, Cajeat E, et al. Variations in the organization and delivery of the 'NHS health check' in primary care. *J Public Health*. 2013;35(1):85-91.
6. Artac M, Dalton ARH, Majeed A, Car J, Huckvale K, Millett C. Uptake of the NHS Health Check programme in an urban setting. *Fam Pract*. 2013;30.
7. Chang K, Soljak M, Lee JT, Worringer M, Johnston D, Khunti K, et al. Coverage of a national cardiovascular risk assessment and management programme (NHS Health Check): Retrospective database study. *Prev Med*. 2015(78):8.
8. Cook EJ, Sharp C, Randhawa G, Guppy A, Gangotra R, Cox J. Who uses NHS health checks? Investigating the impact of ethnicity and gender and method of invitation on uptake of NHS health checks. *International journal for equity in health*. 2016;15(1).

9. Krska J, Du Plessis R, Chellaswamy H. Implementation of NHS Health Checks in general practice: variation in delivery between practices and practitioners. *Primary Health Care Research and Development*. 2016;17:8.
10. Robson J, Dostal I, Sheikh A, Eldridge S, Madurasinghe V, Griffiths C, et al. The NHS Health Check in England: an evaluation of the first 4 years. *BMJ open*. 2016;6(e008840).
11. Attwood S, Morton K, Sutton S. Exploring equity in uptake of the NHS Health Check and a nested physical activity intervention trial. *Journal of public health (Oxford, England)*. 2016;38(3):560-8.
12. Coghill N. Improving the uptake of NHS Health Checks in more deprived communities using 'outreach' telephone calls made by specialist health advocates from the same communities : A quantitative service evaluation. 2016.
13. Sallis A, Bunten A, Bonus A, James A, Chadborn T, Berry D. The effectiveness of an enhanced invitation letter on uptake of National Health Service Health Checks in primary care: A pragmatic quasi-randomised controlled trial. *BMC family practice*. 2016;17(1).
14. Usher-Smith J, Mant J, Martin A, Harte E, Maclure C, Meads C, et al. NHS Health Check Programme rapid evidence synthesis. Cambridge: The Primary Care Unit, University of Cambridge and RAND Europe; 2017 14th January 2017.
15. Ismail H, Kelly S. Lessons learned from England's Health Checks Programme: using qualitative research to identify and share best practice. *BMC family practice*. 2015;16(1).
16. NHS Greenwich. Evaluation of NHS Health Check PLUS Community Outreach Programme in Greenwich.; 2011.
17. Riley R, Coghill N, Montgomery A, Feder G, Horwood J. The provision of NHS health checks in a community setting: An ethnographic account. *BMC Health Services Research*. 2015;15(1).
18. Hawkins NM, Jhund PS, McMurray JJV, Capewell S. Heart failure and socioeconomic status: Accumulating evidence of inequality. *European Journal of Heart Failure*. 2012;14(2):138-46.
19. Mackenbach JP, Cavelaars AEJM, Kunst AE, Groenhouf F, Andersen O, Borgan JK, et al. Socioeconomic inequalities in cardiovascular disease mortality. An international study. *European Heart Journal*. 2000;21(14):1141-51.
20. Scarborough PB. BP, Kaur A., Wickramasinghe K., Rayner M. Ethnic differences in cardiovascular disease. Oxford, UK: University of Oxford; 2010.
21. Brangan E, . Stone, T., Chappell, A., Harrison, V., Horwood, J., Patient experiences of telephone outreach to enhance uptake of NHS Health Checks in more deprived communities and minority ethnic groups: a qualitative interview study. *Health Expectations*. 2018.
22. Braun V, Clarke V. Using thematic analysis in psychology. *Qualitative Research in Psychology*. 2006;3(2):77-101.
23. May C, Finch T. Implementation, embedding, and integration: an outline of Normalization Process Theory. *Sociology*. 2009;43.
24. May C. Towards a general theory of implementation. *Implementation Science*. 2013;8(1):18.
25. Department for Communities and local government. Postcode lookup tool for English indices of deprivation 2015: [opendatacommunities.org](https://www.gov.uk/government/statistics/english-indices-of-deprivation-2015); 2015 [Available from: <https://www.gov.uk/government/statistics/english-indices-of-deprivation-2015>].
26. Miller WR, Rollnick S. Motivational interviewing: Helping people change: Guilford press; 2012.
27. Krska J, Du Plessis R, Chellaswamy H. Views of practice managers and general practitioners on implementing NHS Health Checks. *Primary Health Care Research and Development*. 2016;17(2):198-205.
28. Beeker C, Guenther-Grey C, Raj A. Community empowerment paradigm drift and the primary prevention of HIV/AIDS. *Soc Sci Med*. 1998;46:12.
29. Visram S, Carr S, Geddes L. Can lay health trainers increase uptake of NHS health checks in hard-to-reach populations? A mixed-method pilot evaluation. *Journal of Public Health*. 2015;37(2):8.

30. Shaw RL, Lowe H, Holland C, Pattison H, Cooke R. GPs' perspectives on managing the NHS Health Check in primary care: A qualitative evaluation of implementation in one area of England. *BMJ open*. 2016;6(7).