

What happens after an NHS Health Check? A survey and realist review

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CD and GW are both members of the Royal College of General Practitioners (UK) Overdiagnosis and Overtreatment Group. GW is an NHS General Practitioner and was deputy chair of the National Institute for Health and Care Research Health Technology Assessment Prioritisation Committee: Integrated Community Health and Social Care Panel (A) and member of the Methods Group (A) from 2018 to 2022. JK was a member of the National Institute for Health and Care Research Clinical Doctoral Research Fellowship Committee from 2018 to 2019.

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Scientific summary

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Background

The National Health Service (NHS) Health Check (NHS HC) programme in England aims to provide adults aged 40 to 74 with a five-yearly assessment of their risk of developing cardiovascular disease (CVD) and offer advice on interventions to help manage and reduce this risk. The check involves the measurement of CVD risk factors and calculation of an estimate of overall CVD risk, followed by advice and discussion of the next steps attendees can take to help manage and reduce their risk levels. These may include the delivery of advice and brief interventions, signposting or formal referral to 'lifestyle services' and clinical risk management (including prescribing) per relevant National Institute for Health and Care Excellence guidelines.

The programme is commissioned by local authorities (LAs) and delivered by a range of providers in different settings, although primarily in general practice. Until this year, it was overseen by Public Health England (PHE), who issued regularly updated recommendations and standards to guide commissioning and delivery of the programme. Responsibility for NHS HCs now lies with the new Office for Health Improvement and Disparities (OHID). The minimum standards for NHS HC delivery are a mandatory requirement, but LAs have flexibility in how and who is commissioned to provide checks, to meet local population needs. There is clear evidence of variation in commissioning and delivery of NHS HCs across England. This project focused on what happens after the measurements and risk assessments have been undertaken. We aimed to improve understanding of the variation in the advice, brief interventions, onward referrals and prescriptions offered to NHS HC attendees following a check.

Objectives

1. To map how the programme is currently delivered across England, data collected via an online survey of LAs (with a specific focus on what happens after the measurements and risk assessment and on Covid-19-related changes to delivery models).
2. To conduct a realist review to enable understanding of how the NHS HC programme works in different settings, for different groups, to achieve its outcomes (with a specific focus on what happens after the measurements and risk assessment).
3. To provide recommendations on tailoring, implementation and design strategies to improve the current delivery and outcomes of the NHS HC programme in different settings, for different groups.

Methods

We conducted a survey of LAs in England and a realist review of the literature. We followed the methods described in our published protocol and were guided throughout by input from two stakeholder groups, composed of members of the public eligible for NHS HCs, and professionals involved in commissioning and delivering checks.

Survey of LAs

Our survey aimed to gather additional material for the review and to provide a comprehensive overview of how different localities across England implement the NHS HC. We aimed to (1) describe how NHS HCs are delivered across England, particularly in relation to what happens after the measurements

and risk assessment; (2) develop a typology of LAs based on how NHHSCs were delivered before the Covid-19-related pause and the use of remote methods of delivery after the pause; (3) determine associations between delivery models and a range of indicators. Ethical approval was granted by the University of Kent SRC Ethical Review Panel (for the Division of Law, Society and Social Justice) in February 2021 (SRCEA id 0367).

Survey development and administration

Survey questions were designed in collaboration with our stakeholders. The survey was piloted with three respondents who tested and provided feedback on the questions and structure before it was delivered via Jisc Online Surveys.

The survey was disseminated on our behalf by PHE via regional Health Check Leads and the NHHSC Local Implementer National Forum. It was also publicised via the established NHHSC webinar series. The survey launched on 17 May and closed on 18 July 2021 after several general and targeted reminders.

Data handling and analysis

Survey responses were recorded online and downloaded into Excel and SPSS to aid analysis. Qualitative responses were used to clarify or amend responses where relevant. In some cases, we supplemented information provided via the survey with a search for information on the relevant LA website.

Simple descriptive statistics were used to analyse quantitative responses. Where relevant, qualitative responses were categorised to enable descriptive analysis. To develop a typology of LAs, data from responses to several questions were combined. Associations between delivery, survey responses and other relevant publicly available data were tested using appropriate statistical tests.

Realist review

Realist review is a theory-driven, interpretive approach to evidence synthesis that seeks to examine existing evidence to explain why, when and for whom outcomes occur. Our review followed Pawson's five iterative stages: (1) locating existing theories, (2) searching for evidence, (3) selecting articles, (4) extracting and organising data, (5) synthesising the evidence and drawing conclusions. We began by developing an initial programme theory (IPT), drawing on the knowledge and experience of our project team and scoping searches of the literature. The purpose of this stage was to articulate some of the underpinning assumptions about how the NHHSC programme is intended to 'work'. We also refined the project's focus, in light of the existing evidence.

Data sources

We conducted literature searches to assemble a set of documents likely to contain data that could be used to refine our IPT. We re-used existing resources to compile relevant material by screening the contents of PHE's regularly updated bibliographies of evidence relating to the NHHSC and documents included in PHE-commissioned rapid reviews. We supplemented these with searches in MEDLINE, Cumulative Index to Nursing and Allied Health Literature, Health Management Information Consortium, Web of Science (SCI-EXPANDED, SSCI) to identify material excluded from the existing bibliographies and reviews. In addition, we trawled the NHHSC website to identify local evaluation documents and conference materials, which we knew were an important source of data on learning from local NHHSC implementation and delivery.

Study selection

We screened documents for inclusion by assessing their relevance (i.e. whether they contained data that could be used to refine and develop our IPT) and rigour (i.e. whether those data were considered trustworthy).

We did not automatically exclude documents judged to be of limited rigour, or data not produced directly by a specific research method, as we also made an overall assessment of rigour at the level of the emerging programme theory. A 10% sample of retrieved documents was screened in duplicate to help ensure that our criteria were applied consistently.

Data extraction

We extracted data on the main characteristics of included documents to Excel and uploaded the full text of included documents to NVivo for coding. We coded sections of text which we interpreted as being relevant to what happens after the risk assessment and measurements are completed in an NHSHC. Each new element of data was incorporated into our analysis and as the review progressed, documents were re-scrutinised to ensure that all relevant data were captured. As with screening, a 10% sample of documents were coded in duplicate to ensure consistency.

Analysis and synthesis

A realist logic of analysis was used to make sense of the data included in the review and to develop causal explanations for outcomes relating to our project focus. We interpreted extracted data within and across included documents as relating to important contexts, mechanisms, outcomes, and the relationships between these. Based on our interpretations, we built context-mechanism-outcome configurations (CMOCs), describing how (by which mechanisms) and when (in which contexts) particular patterns of outcomes were generated.

Results

Survey results

We received 68 responses to our survey, representing 74 LAs (49%) across nine regions in England. Our survey results demonstrate the variation that characterises the delivery of the NHSHC programme across England. We developed a typology of three delivery models: general practice only, blended (involving community pharmacies) and blended with outreach (involving delivery in multiple venues including community settings). In response to questions about the impact and response to Covid-19, a small number of respondents reported the adoption of remote delivery methods for NHSHCs but there was a high degree of uncertainty about their effectiveness. The results also highlighted variation in the number of locally commissioned services to support CVD risk management, and confidence that NHSHC providers made appropriate use of these. We found a statistically significant association suggesting that LAs that commissioned NHSHCs with a 'blended with outreach' model also commissioned more support services. Only a small number of LAs routinely requested data on processes or outcomes relating to our project focus.

Review findings

One hundred and twenty-four documents were included in our realist review, contributing data to 86 CMOCs. Our explanations of what happens, when and why after the measurements and risk assessments in an NHSHC are completed are centred on three important groups: LA commissioners, NHSHC providers and NHSHC attendees.

Understanding and engagement with the programme

Our data indicate that all three groups are affected by differences in their understanding of the purpose of the NHSHC and in their engagement with the programme. A lack of clarity about the primary purpose of the NHSHC drives variation in commissioning and delivery. At one extreme, the NHSHC is understood primarily as an opportunity to screen for CVD, and responsibility for its delivery and outcomes rests with primary care. This perspective tends to increase emphasis on the volume of checks delivered and a focus on collecting mandatory data and communicating risk scores. At the other

extreme, the programme is understood primarily as an opportunity to prompt and support behaviour change. Where delivery models reflect this understanding, more emphasis is placed on the delivery of advice and offers of referrals to 'lifestyle services', such as stop-smoking or weight-management services. For providers especially, there is an additional related tension between those who are sceptical of the programme's effectiveness and those who 'buy in' to the NHSHC. Doubts about effectiveness, as well as concerns about appropriate thresholds for intervention and the potential for overdiagnosis in an otherwise 'healthy' population, can lead to disengagement with the programme.

For attendees, understanding of the NHSHC and engagement with the programme are influenced by features of local delivery – our data indicate that attendees take cues from providers in relation to the purpose and importance of the check – but also by their own prior knowledge and priorities in relation to their health. When attendees arrive with an awareness of or desire to make lifestyle changes, they are more likely to engage with the check as an opportunity to access relevant information and support. Personalisation of risk communication and advice can enhance this. Attendees who expect an 'MOT' or screening test may be less receptive to advice about healthy lifestyles and less prepared to consider behaviour change. Those who have health priorities that fall outside the check's focus on CVD may find that it does not meet their expectations or needs. As for providers, attendees' engagement also rests in part on its credibility. Some attendees express doubt about the accuracy of some of the measures used in the check, while others reject advice about healthy lifestyles that they suspect may be subject to change in the future. However, disengaged providers or very time-limited appointments can signal a lack of urgency or importance to attendees.

Practical constraints for commissioners and providers

Practical constraints also affect what it is possible to commission and deliver within the NHSHC programme's remit. Our data point especially to the effects of public health funding cuts which limit delivery options but also restrict the availability of appropriate follow-up services for attendees. Funding models incentivise high-volume delivery and 'opportunistic' checks, which focus on capturing relevant measurements and risk calculation. Providers (especially in general practice) face competing demands for their time. These factors induce a focus on completion of mandatory data collection and reduce the time available for advice and discussion of what attendees might do next. In addition, while a focus on behaviour change may be intended, some providers lack credibility, confidence and skills in delivering personalised 'lifestyle' advice.

Practical constraints for attendees

Attendees' responses to the programme are affected both by features of delivery models and by the constraints they face within their own lives. Lack of follow-up can be demotivating for those attendees who may be interested in attempting to make lifestyle changes. Diminished availability of appropriate, accessible, affordable follow-up services can also leave attendees with few options for support. Lifestyle advice delivered during checks – especially when time is limited – can be frustratingly generic for some, failing to take into account attendees' own preferences, priorities and constraints, which strongly influence their willingness and ability to make and sustain changes.

Conclusions

The results of our survey and realist review have demonstrated and offered a series of explanations for the wide variation in delivery of the NHSHC, with a particular focus on what happens after the measurements and risk assessments have been completed. There is a mismatch between what the programme is intended to deliver and what is delivered and achievable 'on the ground'. Variation is driven by differences in understanding and engagement with the programme, and is compounded by practical constraints on delivery, primarily constrained funding for the programme itself and the follow-up services that it depends upon. For attendees, variation in delivery inevitably affects understanding

and engagement with the programme, but attendees' responses to the check are also affected by their own prior knowledge, health priorities and the constraints they face in their own lives.

Based on our findings, we developed a series of recommendations for policy-makers, commissioners and providers to consider, with the aim of potentially helping to reduce unwarranted variation and improve delivery of the programme. First and foremost, the evidence suggests the need to clarify the purpose and remit of the NHSHC, while also considering what can be delivered well, within funding constraints. While some variation in delivery of the check is likely to be appropriate to meet local population needs, a lack of clarity for the programme overall appears to increase variation and a 'postcode lottery' effect in delivery, especially in relation to what is available to support attendees after a check. With a clearer understanding of the purpose of the programme, policy-makers, commissioners and providers can better consider how to align local delivery, funding models, training provision and data collection and monitoring efforts.

Our findings raise important questions about whether the programme itself and supporting services that it may feed into are adequately resourced to achieve positive outcomes for attendees, and whether current delivery models may produce inequitable outcomes.

Study registration

PROSPERO registration CRD42020163822.

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