**Uptake of NHS Health Check: Issues in Monitoring**

NHS Health Check (NHSHC) was implemented as a national cardiovascular disease (CVD) prevention programme in April in 2009 (Department of Health, 2008). The original programme remit was to identify and manage CVD risk in adults aged 40 to 74 years. All eligible adults should be invited for an NHSHC, in which CVD risk is assessed based on measurements including blood pressure, cholesterol, and other patient information (e.g., age, gender, family history, smoking status), is discussed, and used as a basis for subsequent intervention, such as lifestyle advice, GP referral or signposting to other services.

The economic modelling for NHSHC was based on uptake of 75%. However, the five-year cumulative data indicate that uptake of NHSHC is well below this target (48.5%, 2013-2018). Uptake has improved as the programme has become more established, but remains an area for attention (Robson *et al.*, 2016).

The NHSHC programme standards state ‘timely, good quality data is crucial to establishing robust systems to assess quality and will aid reporting’ (P. 11) (Public Health England, 2014). Unless there are good quality data at a local level, monitoring and evaluation of such preventive health programmes is undermined. Research into UK primary care data quality found that clinical coding systems promoted diversity rather than consistency (Waize and Mbbs, 2007), and diseases such as CHD (Bhattarai *et al.*, 2012) and Stroke (Gulliford *et al.*, 2009) showed substantial variation in diagnostic coding, including consultations and referrals. More recently, a review of the NHSHC programme in Croydon identified a need for more efficient data recording and reporting to improve service quality (Brutus, 2013). Our research, which explored uptake and implementation of NHSHC, found that most general practices were unable to accurately report uptake and corresponding figures reported to the local authority for local and national monitoring were often substantially different (Authors, 2017). This highlighted an important issue to explore; why practices were unable to report NHSHC data accurately and the implications this may have for national monitoring and evaluation.

This report presents findings from interviews with Public Health and Clinical Commissioning Group (CCG) staff to understand how commissioners collect and report data for the programme and consider implications for national and local monitoring and evaluation. Semi-structured, one-to-one telephone interviews were conducted with NHSHC commissioners (n=15) from across England (Midlands and East of England, n=3, North of England, n=5, South of England, n=5, London, n=2). Fourteen participants were employed in Public Health roles and one was employed by the local CCG. Interviews were recorded and transcribed verbatim for thematic analysis(Braun and Clarke, 2006). This involved: familiarisation of data; generation of preliminary codes; and identification of themes before final refinement. The research was approved by Staffordshire University’s Ethics Committee.

**Experiences of Data Reporting for NHS Health Checks**

NHSHC data were largely collected for participants using online extraction systems (directly or via a third party company; table one). Most reported feeding back performance data to practices, most commonly relating to uptake and number of completed NHSHCs. When asked if/what targets are set for practices, they included the number of patients to be invited and/or completed NHSHC. Only five areas (33%) set targets for practices based on uptake. Payments for delivering NHSHC varied. Most provide payments for completed checks, followed by uptake, quality, coverage and additionally for each patient’s first invitation (five areas).

*[Insert table here]*

A small number of participants had no issues when collecting NHSHC data from practices, largely because *“they were able to collect the data themselves”* through online extraction systems.Others reported concerns including: clinical errors, practice consent for data sharing agreements, ineligible patients receiving a NHSHC (i.e., those with diabetes, history of CVD), late data submissions, double coded NHSHCs (i.e., completed check coded by pharmacy and the practice), incomplete NHSHCs, not using the template recommended by the local authority, and receiving abnormally large figures (e.g., 10-fold differences between consecutive quarters).

Issues with opportunistic checks were also evident including coding and practice understanding: *“this is one of the questions that is asked of me, ‘if we do an opportunistic [health check], we’ve not actually invited the patient’ so they won’t actually put the invite code on.’*” Participants found practices did not consider offering a heath check to a patient whilst in the surgery to be a verbal invitation. Subsequently, the patient was not coded as receiving an invitation. The combination of such opportunistic NHSHCs and a gap between patients receiving an invitation and attending a NHSHC also caused problems for participants when reporting quarterly data: *“a health check received doesn’t correlate for a health check offered.”* How they dealt with this issue varied, with some reporting the data submitted to them whilst others matched the number of invitations to completions (i.e., giving 100% uptake): *“We have to add what we call a suspected opportunistic that’s the only way you can balance the books.”* When asked about the accuracy of coding for NHSHC a number of participants believed their practices were accurately recording the checks whilst others were *“not entirely sure because it’s self-reported.”* Electronic data extraction was perceived as *“far more accurate.”* For this reason, two participants who currently relied on self-reported data were looking to implement electronic data extraction: *“ultimately we’d like to move to a system where we are getting the data directly from [software system], which will save work for practices and will give us greater assurance.”*

When asked about national NHSHC data, some participants believed that *“variation with how people are reporting”,* which reduced the perceived credibility of national data: *“I’m not 100% sure that you’re comparing like with like.”* For two commissioners,inconsistencies in reporting opportunistic invitations and relying on self-reported data led them to believe the national data *“may be skewed either negatively or positively by inconsistent coding.”* Others thought it *was “very limited what they [Public Health England] expect back from us”* and it *“doesn’t tell you anything about the quality”* calling for more data to be reported nationally for NHSHC.

Finally, the majority of participants thought, *“an awful lot of emphasis [nationally] is from the uptake percentage”,* which some considered *“a meaningless statistic.”* There were calls for more focus on *“how many are eligible and, of those, how many have had a health check.”* Participants also identified that success of NHSHC varies when uptake is used as a performance indicator: *“if the local authority uses an opportunistic only model then their uptake is going to be very high vs someone who uses the call and recall system.”*

**Implications of Uptake in the NHS Health Check programme**

Overall there was variation in how uptake data were collected, what (if any) performance indicators were fed back to practices, practice targets and payments for delivering NHSHC. Findings also showed opportunistic NHSHCs created problems with coding of invitations and completed NHSHCs that affected the accuracy of data reported to local authorities. Most striking was that a number of participants did not think uptake should be used as a performance indicator for NHSHC locally or nationally. The apparent lack of importance attached to uptake may explain why practices struggle to provide accurate uptake data (Authors, 2017) and perhaps why rates of uptake have plateaued at around 50% nationally. If few localities set targets based on uptake, do not feedback practice performance in terms of uptake (compared to national target), nor consider uptake to be important, practices are less likely to prioritise accurate coding of HC invitations, bookings, cancellations and completions. Nationally, this means current data reported for NHSHC may not be a true representation of programme performance.

A perceived lack of importance of uptake, as seen in our findings, can be compared with findings reported elsewhere. Research exploring quality of clinical coding found barriers including limitations of coding systems, the time required to record data during consultations, health professional’s motivation to complete the task and the level of priority given to coding within the organisation (de Lusignan, 2005). If a health professional’s locality do not prioritise the accuracy of recording invitations in order to quantify uptake, they are less likely to be motivated to accurately record NHSHCs. As Bhattarai and colleagues concluded, a high level of data quality is “desirable in order to promote good clinical practice as well as to enhance the utility of coded records for researchers” (P. 5) (Bhattarai *et al.*, 2012).

In contrast to previous NHSHC research that focussed on perceptions of GPs and practice managers, our data from commissioners and NHSHC leads highlight common concerns about the quality and use of routine NHSHC monitoring data. It is important to recognise that our conclusions are based on a small sample and cannot be assumed representative of all. However, our data do make a case for more robust data gathering to fully understand uptake of NHSHC. It has recently been confirmed that Public Health England will be using the General Practice Extraction Service “to monitor the programme, and help local commissioners and service providers address variation by locality and across different patient groups” (NHS Health Check E-Bulletin October 2017 - www.nhshealthcheck.nhs.uk). This would represent an important step in improving national data quality for monitoring and evaluation of NHSHC. Otherwise, data quality will remain an issue for commissioners locally, which will continue to affect the quality of national data.

**Author Statements**

Author Acknowledgements

The authors would like to acknowledge Jamie Waterall and all participants.

Funding

None declared.

Competing Interests

None declared.

Ethical Standards

Ethical standards were reviewed and approved by (institution name) ethics committee.

**References**

**Bhattarai, N., Charlton, J., Rudisill, C., and Gulliford, M. C***.* 2012: Coding, recording and incidence of different forms of coronary heart disease in primary care, *PLoS ONE*, 7(1). doi: 10.1371/journal.pone.0029776.

**Braun, V. and Clarke, V.** 2006: Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3, 77–101. doi: 10.1191/1478088706qp063oa.

**Brutus, L.** 2013: Croydon NHS Health Check Programme : Review and Options. Croydon Council (October), 1–39.

**Department of Health. 2008:** Economic Modelling for Vascular Checks. Available at: http://www.nhshealthcheck.nhs.uk/i/assets/Economic Modelling.pdf.

**Gulliford, M. C.,** **Charlton, J., Ashworth, M., Rudd, A. G., Toschke, A. M.** 2009: Selection of medical diagnostic codes for analysis of electronic patient records. Application to stroke in a primary care database, *PLoS ONE*, 4(9). doi: 10.1371/journal.pone.0007168.

**de Lusignan, S.** 2005: The barriers to clinical coding in general practice: A literature review, *Medical Informatics and the Internet in Medicine*, 30(2), 89–97. doi: 10.1080/14639230500298651.

**Public Health England.** 2014: NHS Health Check programme standards : a framework for quality improvement. About Public Health England.

**Riley, V.A, Gidlow, C. Ellis, N. J.** 2017: Understanding implementation and uptake in the NHS Health Check programme. Staffordshire University, UK, 1–4.

**Robson, J. Dostal, I., Sheikh, A., Eldridge, S., Madurasinghe, V., Griffiths, C., Coupland, C., Hippisley-Cox, J.**2016: The NHS Health Check in England: an evaluation of the first 4 years, *BMJ Open*, 6(1), p. e008840. doi: 10.1136/bmjopen-2015-008840.

**Waize, T. and Mbbs, T**. 2007: Variation in clinical coding lists in UK general practice : a barrier to consistent data entry?, 143–150.