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Alcohol and physical activity screening in the National Health Service Health Check programme: Comparison of medical records and actual practice

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A B S T R A C T

Objectives: National data for the National Health Service (NHS) Health Check programme (in England), collected by University College London, Public Health England and NHS Digital, found that physical activity and alcohol was recorded in just 64.5% and 38.3% of patient records, respectively. We examined video recorded NHS Health Checks from the RIsk COmmunication in NHS Health Check study (collected 2018–19) to explore alcohol and physical activity measurement, comparing recorded and actual activity.

Study design: Observational study.

Methods: Anonymised medical records and transcripts of 130 video-recorded NHS Health Checks from 12 general practices were compared to understand use of alcohol (Alcohol Use Disorders Identification Test, Alcohol Use Disorders Identification Test-Concise, Fast Alcohol Screening Test) and physical activity (General Practitioner Physical Activity Questionnaire) measures.

Results: Findings showed considerable discrepancies between how alcohol measurement was recorded in the patient's medical record and how it was assessed in practice. Equally, practitioners completed or partially completed AUDIT in fewer than half of patients who were perceived to be eligible for further screening. There was more consistency in physical activity assessment. Omitted questions, related to physical activity, were largely around work-related physical activity.

Conclusions: Overall, inconsistent use of recommended tools for screening alcohol and physical activity in NHS Health Check suggests that some practitioners do not follow recommended national guidance. Omission of certain questions led to missed opportunities for practitioners to discuss alcohol consumption, particularly with those who reported apparently excessive alcohol consumption (>14 units per week). Interviews with NHS Health Check practitioners may help to understand barriers to following recommended practice and identify areas for improvement.

Classification: Restricted.

1. Introduction

NHS Health Check (NHSHC) is a national population-based programme designed to identify and manage cardiovascular disease (CVD) risk in adults aged 40–74 years living in England. Alongside measurement of CVD risk, practitioners gather information on lifestyle.

National Best Practice Guidance for NHSHC [1] asserts that alcohol consumption should be measured using the Alcohol Use Disorders Identification Test (AUDIT) or its abbreviated versions: Alcohol Use Disorders Identification Test-Concise (AUDIT-C); Fast Alcohol Screening Test (FAST). The full AUDIT categorises patients as low-risk, increasing risk, high-risk or possible alcohol dependent, and should be used following a positive screening on the AUDIT-C (score ≥5) or FAST measure (score ≥3). All patients identified as having excessive alcohol intake through the full AUDIT should then receive brief advice. Physical activity should be measured using the General Practitioner Physical Activity Questionnaire (GPPAQ) [2]. This includes three questions (with sub-questions), which are used to derive an overall score that categorises patients as: active, moderately active, moderately inactive or inactive.

The first national data extraction for NHSHC showed that out of the 5.1 million individuals across England who attended an NHSHC, factors such as systolic blood pressure, smoking, and body mass index were recorded for almost all attendees (95.8%, 95.7% and 96.3% respectively) [3]. Yet, physical activity was measured in just 64.5% and alcohol measured in 38.3% of cases [3]. Other smaller studies have shown similar patterns. Examination of medical records by Baker et al. [4] showed that alcohol assessment was recorded in 53.9% of patient medical records, and physical activity was measured in 87.8% of medical records. Similarly, Paxton et al. [5] examined 38 audio recorded NHSHCs in which alcohol consumption was discussed in one-third of patients, but physical activity was recorded in all 38.

Compared to other CVD risk factors, physical activity and alcohol

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consumption appear to be poorly recorded in NHS Health Check [3]. Therefore, using data gathered for the RIsk COmmunication in NHS Health Check (RICO) study [6], we describe the extent to which alcohol and physical activity measures were completed in video recorded NHSHCs, and compare activity recorded in patient medical records with actual practice determined from video recorded NHSHCs.

2. Methods

Anonymised data for 130 NHSHCs across 12 general practices in the West Midlands of England were included [6]. Recruitment and data collection processes are detailed elsewhere [6]. Data analysed were collected as part of the RICO study, approved by the Health Research Authority (November 11, 2017) and the London - Dulwich Research Ethics Committee (September 11, 2017) (reference: 17/LO/1463).

- There were two main sources of data. Medical record data (n = 171; female, 50.29%; mean age 58.2 years; 84.21% White British; and an equal spread across deprivation quintiles) were reviewed to examine recording of alcohol through AUDIT-C, AUDIT, FAST, and other single items, and patient classification of physical activity level according to the GPPAQ. Adherence to recommended practice [1] was explored concerning the respective use of the alcohol measures; specifically, whether the full AUDIT was completed when AUDIT-C score was ≥5 or FAST score was ≥3.
- Transcripts of video recorded NHSHCs (n = 130; 41 were not transcribed for qualitative analysis in RICO because they did not meet the inclusion criteria [i.e., insufficient use of risk calculators]) were examined to explore the extent to which AUDIT/AUDIT-C/FAST and GPPAQ measurements were completed in each video recorded NHSHC. We recorded which questions practitioners asked to determine the measures used and any questions completed/omitted.

Activity from medical records was then compared descriptively with recorded NHSHC data (from transcripts) to determine agreement between medical records and actual practice (n = 130). Results from the comparison are reported here.

3. Results

Findings are reported by the measure used and supported by quantitative data (to show the number of inconsistencies between medical record data and video recorded NHSHCs; Table 1). Extracts taken from video recorded NHSHCs to show evidence of practice are available in the funder's report on the NHS Health Check website (www.healthcheck.nhs.uk/commissioners-and-providers/evidence).

3.1. Alcohol

3.1.1. AUDIT-C

Comparison of medical record and consultation data for AUDIT-C did not match for almost three-quarters of the sample (n = 96/130, 73.8%, Table 1). Often, practitioners recorded AUDIT-C as completed, but did not ask any AUDIT-C questions (n = 48/130, 36.9%). Instead, practitioners frequently asked the patient about their alcohol consumption in an alternative way (i.e., What would you say you drink in a week? How many units do you drink? Confirmation of recorded units in patient record). Many practitioners, who partially completed the AUDIT-C, overlooked the final question about frequency of 'binge' drinking (i.e., How often have you had 6 or more units if female, or 8 or more if male, on a single occasion in the last year?) (n = 30/40, 75%).

Recorded versus actual practice regarding completion or non-completion of AUDIT-C matched for just a quarter of Health Checks (n = 34; 26.2%), or when the practitioner failed to code AUDIT-C as completed following completion or partial completion of the measure in the consultation (n = 11, 8.5%).

Table 1
Comparison of medical record review (MRR) data and data from video recorded NHSHCs.

Alcohol measure	n	%[a]
AUDIT-C		
Data matched (coded and completed/not coded and not completed)	34	26.2
Data were inconsistent	96	73.8
MRR recorded as complete, AUDIT-C questions not asked in consultation	48	36.9
… but were asked an alternative question about alcohol in consultation	46[b]	35.4
MRR recorded as complete, AUDIT-C questions partially completed in consultation	37	28.5
MRR not recorded as completed, AUDIT-C question completed in consultation	7	5.4
MRR not recorded as completed, AUDIT-C questions partially completed in consultation	4	3.1
AUDIT		
Data matched (coded and completed/not coded and not completed)	94	72.3
Data were inconsistent	36	27.7
MRR recorded as complete, AUDIT questions not asked in consultation	25	19.2
MRR recorded as complete, AUDIT questions partially completed in consultation	11	8.5
GPPAQ DATA		
Data matched (GPPAQ in patient record and ≥1 GPPAQ question asked in consultation[c])	125	96.2
Data were inconsistent	5	3.8
MRR recorded as complete, physical activity levels not asked in consultation	1	0.8
MRR recorded as incomplete, physical activity levels asked in consultation	4	3.1

[a] % as proportion of the 130 patients with recorded NHSHCs.
[b] 96 is the sum of rows italicised under 'data were inconsistent'. The 46 cases referred to in the table are a sub-sample of 48, where MRR data were *'recorded as complete, AUDIT-C questions were not asked in the consultation'*. While these patients were not asked AUDIT-C questions, they were asked an alternative question about alcohol in the consultation.
[c] Asking at least one question related to physical activity and using other physical activity-related information collected in the NHS Health Check (i.e., working status/job type) could allow the practitioner to determine the patient's physical activity level.

3.1.2. AUDIT

There was greater consistency when using AUDIT (n = 94, 72.3%) as in many cases the AUDIT was neither completed, nor recorded as completed. Where data were inconsistent, this was largely due to a partially completed AUDIT in practice, but with a completed AUDIT recorded in the patient medical record (n = 25, 19.2%). Recommended practice states that AUDIT should be used for those in which the AUDIT-C score is ≥ 5. AUDIT-C scores were calculated by the researcher, based on consultation transcripts, to determine if completion of AUDIT was required. Forty patients scored ≥5 using the AUDIT-C criteria and therefore required AUDIT screening. Consultation data indicated that practitioners completed or partially completed AUDIT in fewer than half of patients who scored 5 or more on the AUDIT-C and were, therefore, eligible (Completed AUDIT, n = 12/40 or 30%; Partially completed AUDIT, n = 6/40 or 15%). Subsequently, practitioners explored the patient's alcohol consumption in more detail or recommended that they reduce their alcohol intake before proceeding to the next part of the NHSHC.

3.1.3. FAST

Where FAST was recorded as complete (2 practices, 11 patients), AUDIT-C and/or AUDIT were also recorded. On review of the NHSHC transcripts, it appeared that practitioners did not ask the FAST question (s) in isolation but did ask some or all of the AUDIT-C questions. Therefore, these cases are included in AUDIT-C/AUDIT totals.

3.2. Physical activity

3.2.1. GPPAQ

Medical record and consultation data matched for the GPPAQ measurement in nearly all (i.e., coded and ≥1 GPPAQ question asked in the

consultation; n = 125/130, 96.2%, Table 1) cases. The most frequently omitted question referred to work-related physical activity. There were very few instances where physical activity questions were asked during the NHSHC and subsequently not recorded in the patient's medical record (n = 4) or were not asked but were recorded in the patient's medical record (n = 1).

4. Discussion

Our data show that medical records may not provide an accurate account of how alcohol consumption is screened in NHSHC. Use and recording of GPPAQ to measure physical activity was more consistent. Questions related to alcohol consumption and engagement in physical activity were asked in nearly all NHSHCs. However, the approach and extent of information gathered by practitioners varied, particularly regarding alcohol consumption.

Whilst some practitioners used the recommended alcohol validated screening tools, there was considerable mismatch between how alcohol intake was recorded in the patient's medical record and the way it was discussed in practice. Failure to ask questions about harmful drinking led to some missed opportunities for practitioners to discuss alcohol with those who had a positive screening from AUDIT-C.

For assessment of physical activity, omission of questions included in GPPAQ may not prevent practitioners from completing the measure based on other patient information (e.g., using patient's working status/job role to estimate work-related activity). Yet, failure to screen alcohol consumption and physical activity using validated tools (i.e., AUDIT, AUDIT-C, FAST, GPPAQ) suggests deviation from NHSHC best practice guidance [1].

Other studies have shown that poor adherence to screening for alcohol and physical activity are thought to be a result of limited training, lack of confidence or time, concerns about the impact on the practitioner-patient relationship, and patient compliance [5,7,8]. Practitioners perceive alcohol screening to be a sensitive topic for older individuals, adding concerns about stigma, particularly for individuals who consume more than the recommend guidelines [9]. Those engaged in heavy drinking are also perceived to be more likely to lie about their alcohol consumption, and are less supportive of routine screening for alcohol intake than those who drink less [10]. The extent to which this reflects barriers to following recommended practice and subsequent support required to improve screening in NHSHC, should be explored.

Strengths of this study include a dataset that provided unique comparison between patient medical records and actual practice of alcohol and physical activity measurement. Several limitations are recognised. First, the sample size of 130 patients across 12 general practices in the West Midlands; although a large qualitative dataset, we cannot assume it is representative of practice in other localities. Second, due to the original study design, only a sub-sample of the total 171 video recorded NHSHCs were transcribed and available for secondary analysis which may have led to selection bias. However, the sub-sample of consultations used were representative of the overall study sample. Third, the context of the overall study (i.e., video-recorded Health Checks) may have affected practitioner behaviour. Yet, any effect would mean that inconsistencies reported here are an underestimate in use of the validated tools and subsequent risk-factor recording.

5. Conclusion

Data from patient medical records may not provide an accurate account of how alcohol intake is measured in NHSHCs. Measurement and recording of physical activity were more consistent. Practitioners discussed alcohol consumption and physical activity in almost all NHSHC consultations, but few adhered to recommended guidance, particularly when screening for alcohol intake.

Interviews with NHSHC practitioners to help understand barriers to following recommended practice and subsequent support to improve screening in NHSHC, should be explored.

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Conflict of interest

None to declare.

Ethics approval

Data analysed were collected as part of the Risk COmmunication in NHS Health Check study, with approvals from the Health Authority Approval (November 11, 2017) and the London - Dulwich Research Ethics Committee (September 11, 2017) (reference: 17/LO/1463). As part of the individual participant-level consent process, participants were required to provide consent for the research team to review their medical records and to video-record their NHS Health Check for analysis.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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