

Healthy Weight

Healthy Ageing

Improving How Physical Activity is Assessed in Primary Care: Integrated Summary Briefing

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Background

Regular physical activity provides well-documented health benefits, such as reduced risk of premature mortality [1], chronic diseases [2] and cardiovascular conditions [1], and improved mental health and wellbeing [3]. The UK Chief Medical Officers (CMO) recommend at least 150 minutes of moderate-intensity aerobic PA per week, plus strength and balance training twice weekly [4]. However, around one-fifth of the English population are believed to be physically inactive [5], making this a significant public health concern.

Physical activity assessment has been integrated into routine NHS practice, through the NHS Health Check programme delivered in primary care [6]. Primary healthcare professionals, such as general practitioners and nurses, are well placed to identify individuals who are not meeting the CMO physical activity guidelines and to provide brief advice to support behaviour change. This is in line with the National Institute for Health and Care Excellence (NICE) guidance [7]. The General Practice Physical Activity Questionnaire (GPPAQ) is the recommended assessment tool for physical inactivity. It is a validated assessment tool currently referenced within NHS Health Check national guidance and embedded within existing delivery pathways. GPPAQ is presently the only validated instrument used within this context that categorises individuals across four physical activity levels (inactive, moderately inactive, moderately active, and active), aligning with requirements established within The Local Authorities (Public Health Functions and Entry to Premises by Local Healthwatch Representatives) Regulations 2013. However, evidence on its current implementation remains limited and it may not be the most appropriate tool for measuring physical activity in some populations, notably older adults.

The Department of Health and Social Care (DHSC) commissioned the NIHR Policy Research Unit in Healthy Weight and the NIHR Policy Research Unit in Healthy Ageing to review the suitability of the GPPAQ for assessing physical activity levels in primary care. To address this, the study included three components: an analysis of electronic health record data from the Clinical Practice Research Datalink (CPRD) to examine how GPPAQ is used in routine general practice [8]; an expert-informed rapid review of the evidence on the validity and reliability of physical activity assessment tools suitable for use in UK primary care [9]; and an expert roundtable discussion to interpret the findings and inform policy recommendations [10].

Key Findings

The use of GPPAQ in English primary care

The analysis showed that GPPAQ is primarily used to assess physical activity in high-risk populations, including people with obesity or pre-diabetes, and those living in socioeconomically disadvantaged areas. GPPAQ assessments are recorded for around one in ten adults and are commonly completed by healthcare assistants and nurses. GPPAQ is typically used in NHS Health Checks and cardiovascular reviews,

with over half of recordings being repeat assessments. It is seldom used during new patient appointments. Around 60% of GPPAQ recordings are followed by advice or an intervention, particularly for those identified as inactive. However, there is limited evidence on whether the use of GPPAQ and subsequent interventions lead to improved physical activity levels or health outcomes.

An expert-informed rapid review on brief tools of physical activity assessment tools

The rapid review of physical activity assessment tools found that GPPAQ, Exercise Vital Sign (EVS), Physical Activity Vital Sign (PAVS), and the International Physical Activity Questionnaire (IPAQ) Short Form are all feasible, acceptable and generally reliable for identifying inactive individuals. However, all showed poor to moderate validity compared with sensor-based or instrumented measures of physical activity at assessing the level of physical activity. Each tool has specific limitations: GPPAQ underestimates activity in older adults; PAVS shows lower validity amongst women and those with lower educational attainment; and EVS has variable validity between sex and other population subgroups. Performance of the tool in different socio-economic groups was limited, with some variation in performance by sex and education level. None of the tools adequately captured strength or balance activities. Whilst adaptations to GPPAQ (such as GPPAQ-Walk and GPPAQ-Walk Old) improved the tool's ability to identify inactive older adults, this came at the expense of reduced specificity (identifying active individuals). More broadly, the evidence base is limited by a lack of direct comparative studies, insufficient data on performance in diverse populations, and the absence of standard criteria for assessing tool performance.

An expert roundtable on tools to support physical activity assessment in primary care

The expert roundtable highlighted a range of perspectives on the use of physical activity assessment tools in primary care. Some experts had a preference for alternative tools such as the EVS and PAVS, which are shorter, aligned more closely with national guidelines, and increasingly integrated into hospital systems. Concerns were raised about the inclusivity of some of the tools, particularly their ability to capture different types of activity across varying functional abilities and occupational roles. It was also reported that older and less active individuals are less likely to report having conversations about physical activity, and that GPPAQ may misclassify individuals in manual or trade occupations as inactive despite meeting activity recommendations.

There was a broad agreement that whilst physical activity assessment is important for identifying those who may benefit from support, there is currently no standardised pathway linking assessment to follow-up actions such as advice, referral or social

prescribing. When considering interventions, participants also reported that capability, opportunity and motivation need to be assessed.

Experts emphasised that tools should be quick to use and primarily act as prompts for personalised, empathetic conversations. The effectiveness of assessment could be determined by what follows as much as the accuracy of the assessment. There was also growing interest in using digital tools to assess physical activity, including the use of smartphones and wearables. Concerns remain about data accuracy, system integration and the risk of widening inequalities due to digital exclusion. Variation in practice was noted, with GPPAQ use highest where it is embedded in structured pathways and incentivised. Greater integration into processes such as new patient registration and health checks may increase uptake, although this may not guarantee meaningful engagement.

Overall, the expert group agreed that the focus is not on selecting a single, best tool but on providing primary care professionals with a range of options depending on individual and contextual factors, as no single tool is able to meet the needs of diverse population groups. Access to a range of tools and approaches for assessing physical activity would allow the most appropriate approach to be chosen for any individual. This may improve inclusivity, engagement and relevance for both patients and clinicians. Experts recognised the growing potential to utilise digital health tools (e.g. NHS App, smartphones, wearables) to support physical activity assessment. These can enhance engagement and provide more objective data. However, challenges remain around accuracy on recording data, system integration into clinical systems, and variation on access across population groups, particularly in the context of an ageing and increasingly digitally enabled population.

Implications for policy

The findings align with several core priorities of the NHS 10-Year Plan, particularly around prevention, digital transformation, and reducing inequalities.

Although GPPAQ is a validated tool and is embedded within national guidance and established care pathways, its routine use within integrated care delivery may not be consistent across settings. This highlights implications for policy implementation and service delivery. As such, decisions regarding physical activity assessment approaches are not solely methodological, but are also shaped by existing policy infrastructures, commissioning arrangements and service delivery requirements.

- The distinction between population-level surveillance and individual clinical assessment is important.
 - Assessment is primarily about identifying inactive people, not measuring physical activity levels in people who are already active. This means that primary care data will be of limited use for surveillance of physical activity in the whole population.
 - Assessment is also about engaging people and part of a conversation to promote physical activity. Whilst measurements are important, impact depends on how assessments are used, particularly on the quality of subsequent conversations and interventions.

- Physical activity assessment needs to be flexible, inclusive, and better integrated with digital health.
 - Incorporating the use of wearable devices into health checks may present an opportunity to develop their use in routine practice, but caution noted on reliability of data.
- A set of tools that effectively and inclusively assess physical activity would provide the clinician with a menu of options that can be adapted to different populations and clinical contexts, rather than relying on a single standardised tool.

Future Research Questions

1. Does physical activity assessment in primary care lead to improved physical activity levels, behaviour change or health outcomes?
2. Which tools (GPPAQ, EVS, PAVS, IPAQ) work best for different primary care purposes and settings?
3. How well do existing tools perform across diverse population groups?
4. How can tools reduce misclassification among people in manual, trade or physically demanding occupations?
5. How can brief tools better capture strength, balance and functional activity?
6. What happens after someone is identified as inactive, and which follow-up pathways are most effective?
7. To what extent does the quality of the conversation following assessment determine outcomes?
8. Why are older and less active people less likely to report conversations about physical activity in primary care?
9. What explains variation in GPPAQ use across primary care settings?
10. How can digital physical activity assessment avoid widening inequalities?
11. How should physical activity data be recorded, shared and used in clinical systems?
12. What criteria should be used to compare and evaluate physical activity assessment tools?

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