NICE National Institute for Health and Care Excellence

Surveillance proposal consultation document

2018 surveillance of Physical activity in the workplace (NICE guideline PH13)

Surveillance background

This 2018 surveillance review has taken into account 3 NICE guidelines on the theme of physical activity:

- Physical activity in the workplace. NICE guideline PH13 (May 2008).
- Physical activity for children and young people. NICE guideline PH17 (January 2009).
- Physical activity: exercise referral schemes. NICE guideline PH54 (September 2014).

This report details the surveillance proposal for one of these guidelines, NICE guideline PH13. Details of the review proposals of the other 2 physical activity guidelines, PH17 and PH54, can be found on the respective websites.

Proposed surveillance decision

We propose to not update the NICE guideline on physical activity in the workplace at this time.

Reasons for the proposal to not update the guideline

The majority of new evidence was found to be broadly consistent with the current recommendations. We found some new evidence on the specific components of physical activity programmes which are not currently included in the guideline, however, more evidence on the long-term effects are needed before an impact on the guideline can be assessed. Ongoing trials assessing the long-term effectiveness of sit-stand desks are being monitored and will be reviewed once the results are published.

For further details and a summary of all evidence identified in surveillance, see appendix A below.

Overview of 2018 surveillance methods

NICE's surveillance team checked whether recommendations in physical activity in the workplace (NICE guideline PH13) remain up to date.

The surveillance process consisted of:

- Initial feedback from topic experts via a questionnaire.
- Input from voluntary and community sector organisations and stakeholders on known variations in practice and policy priorities.
- Literature searches to identify relevant evidence.
- Assessment of new evidence against current recommendations.
- Deciding whether or not to update sections of the guideline, or the whole guideline.
- Consultation on the decision with stakeholders (this document)

After consultation on the decision we will consider the comments received and make any necessary changes to the decision. We will then publish the final surveillance report containing the decision, the summary of the evidence used to reach the decision, and responses to comments received in consultation.

For further details about the process and the possible update decisions that are available, see ensuring that published guidelines are current and accurate in developing NICE guidelines: the manual.

Evidence considered in surveillance

Search and selection strategy

We searched for new evidence related to the whole guideline.

We found 20 studies in a search for randomised controlled trials and systematic reviews published between 1 August 2014 and 15 February 2018.

See appendix A: summary of evidence from surveillance below for details of all evidence considered, and references.

Selecting relevant studies

During the original guideline development, studies from the USA and Asia were excluded due to time constraints. Studies were included if they were implemented in the UK, the rest of Europe, Australia, New Zealand and Canada. During surveillance, we included studies from all countries because this was the original intention during guideline development. With the exception of this change, the inclusion and exclusion criteria from the original guideline were applied during study selection.

Ongoing research

We checked for relevant ongoing research; 4 studies were assessed as having the potential to change recommendations; therefore we plan to check the publication status regularly, and

evaluate the impact of the results on current recommendations as quickly as possible. These studies are:

- The effectiveness and cost-effectiveness of an employer-led intervention to increase walking during the daily commute: a cluster randomised controlled trial
- Effectiveness of a behaviour-change intervention with sit-stand desks on NHS desk-based staff's sitting time and associated factors (SMArT Work): a cluster randomised controlled trial
- Effectiveness and cost-effectiveness of a Physical Activity Loyalty scheme to maintain behaviour change: a cluster randomised controlled trial
- A cluster randomised controlled trial to investigate the effectiveness and cost-effectiveness of a Structured Health Intervention For Truckers (The SHIFT Study)

Intelligence gathered during surveillance

Views of topic experts

We considered the views of topic experts, including those who helped to develop the guideline.

For this surveillance review, 6 topic experts completed a questionnaire about developments in evidence, policy and services related to the guideline. Four of the topic experts felt that the guideline needs updating, whereas 2 experts felt that an update was not needed. The main areas that they highlighted for update included new workplace interventions to tackle sedentary behaviour and a need to make the guideline more intervention-focussed. See appendix A: summary of evidence from surveillance below for details of how these concerns have been addressed.

Views of voluntary and community sector organisations

For this surveillance review, 1 voluntary and community sector organisation completed a questionnaire about developments in evidence, policy and services related to the guideline. Feedback from the questionnaire indicated that they felt the guideline should be updated to include more consideration of behavioural mechanisms to increase physical activity in the workplace, such as the use of Workplace Champions. See appendix A: summary of evidence from surveillance below for details of how this concern has been addressed.

Views of stakeholders

Stakeholders are consulted on all surveillance decisions except if the whole guideline will be updated and replaced. Because this surveillance decision was to not update the guideline, we are consulting on the decision.

See ensuring that published guidelines are current and accurate in developing NICE guidelines: the manual for more details on our consultation processes.

Equalities

No equalities issues were identified during the surveillance process.

Editorial amendments

During surveillance of the guideline we identified the following issues with the NICE version of the guideline that should be corrected.

- There is a cross referral in recommendation 3 to NICE guideline PH8 which needs correcting. This guideline has been updated and replaced by NICE guideline NG90 (Physical activity and the environment).

Overall decision

After considering all evidence and other intelligence, we decided that no update is necessary at this time.

Appendix A: Summary of evidence from surveillance

2018 surveillance of Physical activity in the workplace (2008) NICE guideline PH13

Summary of evidence from surveillance

Studies identified in searches are summarised from the information presented in their abstracts.

Feedback from topic experts who advised us on the approach to this surveillance review was considered alongside the evidence to reach a final decision on the need to update each section of the guideline.

This guideline was previously reviewed in 2011 and again in 2014. At both time points, the surveillance review decision was not to update the guideline. The findings from previous surveillance were taken into account in the 2018 surveillance review. Further details of the 2011 and 2014 reviews can be found on the PH13 website.

Recommendation 1: policy and planning

Who should take action?

- Employers in organisations of all sizes (in larger organisations this might include their representatives, for example, human resources [HR] directors and senior managers).

- Public health professionals, occupational health professionals, workplace health promoters.
- Trades unions, other employee representatives, employees.

What action should they take?

- Develop an organisation-wide plan or policy to encourage and support employees to be more physically active. This should:
- include measures to maximise the opportunity for all employees to participate
- be based on consultation with staff and should ensure they are involved in planning and design, as well as monitoring activities, on an ongoing basis
- be supported by management and have dedicated resources
- set organisational goals and be linked to other relevant internal policies (for example, on alcohol, smoking, occupational health and safety, flexible working or travel)
- link to relevant national and local policies (for example, on health or transport).

Surveillance decision

No new information was identified at any surveillance review.

This recommendation should not be updated.

Recommendation 2: implementing a physical activity programme

Who should take action?

- Employers in organisations of all sizes (in larger organisations this might include their representatives, for example, human resources [HR] directors and senior managers).
- Public health professionals, occupational health professionals, workplace health promoters.
- Trades unions, other employee representatives, employees.

What action should they take?

Introduce and monitor an organisation-wide, multi-component programme to encourage and support employees to be physically active. This could be part of a broader programme to improve health. It could include:

- flexible working policies and incentive schemes

- policies to encourage employees to walk, cycle or use other modes of transport involving physical activity (to travel to and from work and as part of their working day)
- the dissemination of information (including written information) on how to be more physically active and on the health benefits of such activity. This could include information on local opportunities to be physically active (both within and outside the workplace) tailored to meet specific needs, for example, the needs of shift workers
- ongoing advice and support to help people plan how they are going to increase their levels of physical activity
- the offer of a confidential, independent health check administered by a suitably qualified practitioner and focused on physical activity.

Recommendation 3: components of the physical activity programme

Who should take action?

- Employers in organisations of all sizes (in larger organisations this might include their representatives, for example, human resources [HR] directors and senior managers).
- People responsible for buildings and facilities
- Public health professionals, occupational health professionals, workplace health promoters.
- Trades unions, other employee representatives, employees.

What action should they take?

- Encourage employees to walk, cycle or use another mode of transport involving physical activity to travel part or all of the way to and from work (for example, by developing a travel plan).
  - Help employees to be physically active during the working day by:
  - where possible, encouraging them to move around more at work (for example, by walking to external meetings)
  - putting up signs at strategic points and distributing written information to encourage them to use the stairs rather than lifts if they can
  - providing information about walking and cycling routes and encouraging them to take short walks during work breaks
  - encouraging them to set goals on how far they walk and cycle and to monitor the distances they cover.
- Take account of the nature of the work and any health and safety issues. For example, many people already walk long distances during the working day, while those involved in shift work may be vulnerable if walking home alone at night.

For further recommendations on how to encourage people to walk, cycle or use the stairs, see 'Promoting and creating built or natural environments that encourage and support physical activity' (NICE public health guidance 8).

Surveillance decision

These sections of the guideline should not be updated.

An editorial correction is needed in recommendation 3. The cross referral to NICE guideline PH8 should be corrected to refer to the updated version of the guideline which is: physical activity and the environment (NICE guideline NG90).

Physical activity programmes

2018 surveillance summary

Alternative work stations

Two systematic reviews were identified which examined the effectiveness of interventions to reduce sedentary behaviour and increase physical activity in the workplace (1). Findings from a Cochrane review (1) (20 studies, n = 2,180) indicated that sit-stand desks may decrease sedentary time by 30 minutes, however the evidence was low quality and there were no data on long term effects. Other interventions such as physical workplace changes, policy changes and information/counselling were found to have little or inconsistent effects.

Results from the second review (2) of 40 studies (n not reported) indicated that alternative workstations are effective at reducing sedentary behaviour, whilst stair use promotion and personalised behavioural interventions were found to improve physical activity at work and overall physical activity levels respectively.

In addition, four RCTs were identified which examined the effectiveness of sit-stand workstations on office-workers' sedentary behaviour and physical activity. Intervention periods varied between 4 weeks (3),(4), 12 weeks (5) and 13 weeks (6) and sample sizes were 25 (5), 26 (4), 32 (6), 42 (3). The Intervention groups were either compared to a sitting desk control (3,5,6)) or baseline (4). Results indicated that sit-stand work stations significantly reduced sedentary time (3–5), increased standing time (3–5) and increased total physical activity (6).

One RCT (7) (n = 41) examined the effect of a shared treadmill desk on improving physical activity in overweight office workers. The intervention lasted 3 months and was compared to a usual working control group. Results indicated a significant increase in daily steps and light physical activity as well as a decrease in sedentary time during working hours.

Walking and exercise programmes

A Cochrane review examined the effectiveness of pedometer interventions to increase physical activity in the workplace (4 studies, n = 1809) (8). The authors concluded that all of the studies had a high risk of bias and that there was insufficient evidence to assess the effectiveness of pedometer interventions in the workplace.

Two RCTs were also identified which examined the effectiveness of different walking and exercise programmes on increasing physical activity in the workplace:

- A pedometer-driven walking programme for employees with an educational component was found to significantly increase step counts and self-reported physical activity at 3 months, compared to baseline. The control group received education only, however change in step count and between-group differences were not reported. (9) (n = 58).
- A 10-week lunchtime exercise programme was found to significantly increase physical activity levels in employees compared to baseline. The intervention was called 'active rest' and consisted of warm-up, cognitive functional training, aerobic exercise, resistance training and cool down for 10 minutes per day, 3 times a week. Between-group differences between intervention and control were not reported. (10) (n = 59).

Computer-based interventions

Four RCTs were identified which examined the effectiveness of computer-based interventions on increasing physical activity in the workplace:

- An internet-based walking programme for employees with tailored step goals was found to significantly increase step counts after 6 weeks, compared to a no-treatment control. (11) (n = 265).
- A 19-week workplace web-based intervention with was found to significantly reduce self-reported occupational sitting, compared to a no treatment control. (12) (n = 264).
- A computer-tailored pedometer intervention in the workplace, which gave personalised advice, was found to significantly increase daily step counts after 1 and 3 months compared to control. (13) (n = 174).
- A computer-based intervention ('Booster Break') was found to significantly increase weekly step counts and decrease sedentary behaviour in employees compared to a usual break control group. The intervention prompted employees to take a 15-minute activity break (no further details reported in the abstract). Self-reported physical activity during leisure time was also found to significantly increase in the intervention group compared to control. The duration of the programme is not reported in the abstract, however authors state that the study ran from 2010 to 2013. (14) (n = 175).

Incentive programmes

Three RCTs were identified which examined the effectiveness of incentive programmes on increasing physical activity in the workplace:

- Activity trackers with cash incentives for employees were found to significantly increase time spent in moderate to vigorous physical activity (MVPA) compared to a control after 6 months but not after 12 months. Activity trackers with a charity incentive were found to significantly increase time spent in MVPA compared to a control at both 6 and 12 months. There was no difference in MVPA between incentive groups and the activity tracker only group at 6 months. There was also no difference in MVPA between the Fitbit only group and control. (15) (n = 800).
- A 9-month enhanced walking programme with incentives was shown to significantly increase employee step counts compared to a standard walking programme. The intervention consisted of incentives, feedback, competitive challenges, and monthly wellness workshops. (16) (n = 474).
- An RCT compared different types of financial incentive schemes to a no incentive control. All participants received daily feedback on reaching a 7000 steps target, with 3 intervention groups receiving either $50 for meeting their goal (individual incentive), $50 if all team members met the goal (team incentive), or $20 for individual goal with an added $10 for each team member reaching their goal (combined incentive). During the 13-week intervention period, the combined incentive group were significantly more likely to reach 7000 steps compared to the control group. There were no differences between control and individual or team incentive groups. During the 14-26 week follow-up period, there were no differences between study arms, indicating no long-term effect. (17) (n = 304).

Support and counselling

Three RCTs were identified which examined the effectiveness of supportive or counselling interventions on increasing physical activity in the workplace:

- A 12-month intervention of organisational support both with and without activity trackers significantly reduced prolonged sitting time at work and increased standing time. The only significant between-group differences were greater stepping time and step count in the activity tracker assisted group. Organisational support strategies lasted 12 months and included manager support and emails whereas the activity tracker gave feedback and prompts on sitting and posture. (18) (n = 66).
- A pedometer-based group counselling intervention for female employees significantly increased total steps after 3 months, compared to baseline. This was also the case for a pedometer-based counselling intervention for individuals. However, the increase in step count was significantly higher in the group counselling employees compared to the individual counselling group. After 6 months, no effect on physical activity in any group was observed. The third comparator group were given aerobic training but no difference in physical activity levels over the study period were observed. (19) (n = 195).

A 10-week theory-based group walking intervention for employees was found to significantly increase step counts compared to a comparator group. The

intervention consisted of a weekly walking group followed by a meeting to discuss cognitive-behavioural strategies targeting self-efficacy. The comparator group also had a weekly walk but no further support. After 20 and 30 weeks, step counts were maintained but significance is not reported in the abstract. (20) (n = 56).

Intelligence gathering

One topic expert highlighted that there may be a cost barrier to one of the actions in recommendation 2 which states "offer of a confidential, independent health check administered by a suitably qualified practitioner".

Another topic expert noted that the range of interventions listed in the guideline may be limited. They mentioned that the guideline does not include any recommendations on step counters, which are covered in guidance elsewhere (such as the Centres for Disease Control and Prevention and British Heart Foundation).

A voluntary and community sector organisation noted that the behaviour aspect of encouraging physical activity may be neglected in the guideline. They mentioned that 'Workplace Champions' can enable peer-to-peer promotion of active travel and also highlighted that the guideline does not cover building features such as providing employees with shower facilities.

Another topic expert expressed concern over the generalisation of guidance related to 'workplaces', suggesting that this implies a homogeneity that is not representative of today's workplaces. Similarly, it was highlighted that lower-paid jobs often involve more physical activity in certain sectors.

It was also felt that the guideline should cite the barriers to physical activity in the workplace and include information on why employees may or may not engage in physical activity. However it was felt that this is already taken into account in NICE guideline PH49 (Behaviour change: individual approaches).

The policy paper "Moving More, Living More: Olympic and Paralympic Games legacy" (21) was highlighted as a useful resource on how to increase physical activity in the workplace. It recommends: incentive schemes; signposting to opportunities; providing cycle parking and shower/changing facilities; encouraging cycle hire making reimbursement easier; encouraging team activities with element of friendly competition.

An ongoing trial was identified which may have an impact on the guideline in future. The SMArT Work: Stand More AT Work trial assesses the effectiveness of sit-stand desks on employee sitting time at work. The intervention will also include other behaviour change techniques informed by the 'behaviour change wheel'. The follow-up time will be 12 months.

Impact statement

Alternative workstations

There was some evidence to suggest that sit-stand desks may be effective in reducing sedentary behaviour in the workplace. However, findings from a recent Cochrane review indicate that the evidence is low quality and there are no data on the long term effects. Results from more recent trials are consistent with this, showing positive results but with short follow-up times. There are currently no recommendations on sit-stand desks in

PH13. However, until there is more evidence showing a long term impact on sedentary behaviour the guideline will not be changed. The ongoing trial 'SMArT Work: Stand More AT Work' will be added to our event tracker and the results will be considered when they are published.

Walking and exercise programmes

Results from a Cochrane review suggested that there was insufficient evidence on the effectiveness of pedometer interventions to increase physical activity in the workplace. The guideline does not currently make any specific recommendations on the use of pedometers so no impact is expected at this point.

There was evidence to suggest that a walking programme with an educational component was effective in raising employee step count. It is not clear whether the walking programme or the educational component was the cause of the increase in step count because between-group differences were not reported. Due to this uncertainty, no impact on the guideline is expected. Similarly, a structured lunchtime exercise programme was found to increase physical activity levels compared to baseline. However, these results were based on a single study with a small sample size. Further evidence is needed before impact on guidance can be assessed.

Incentive programmes

There was evidence to suggest that various incentive schemes may increase physical activity in the workplace, which is in line with the guideline. However results from 2 RCTs suggested that the benefit may be short-term, with some, but not all, of the effects not lasting to 14-26 weeks or 12 month follow-up periods. Until there is more evidence on the long term effects of incentive programmes, the guideline will not be affected.

Other interventions and comments

A range of studies was identified on the use of computer-based programmes, support programmes and counselling in the workplace to encourage physical activity. These interventions included elements such as tailoring messages to individuals, providing pedometers to track progress and offering support to increase physical activity. This is broadly consistent with the guideline which already recommends introducing a multiple-component programme which could include information provision, advice and support, monitoring distances covered, health checks and encouraging physical activity during breaks or around the building. Although there is no specific mention of computer-based interventions, it is likely that these are covered by the broader recommendations in this guideline. Therefore no impact on the guideline is expected.

A topic expert raised concerns about the limited range of interventions recommended in the guideline. We not identify any evidence that would impact the guideline in this area so no impact on the guideline is expected. We will make a note of this concern for future surveillance.

A concern was also raised about the potential cost barrier of the health checks suggested in recommendation 2. Health checks are 1 of the 5 suggestions in this recommendation on physical activity programme components. Whilst it is acknowledged that this might not be a

feasible option to some workplaces, it was felt that it could still be a relevant suggestion to others, so no impact on the guideline is expected at this time. We will monitor this area and review again at the next surveillance review.

We did not identify any evidence on the use of 'Workplace Champions', as suggested by a voluntary and community sector organisation. Therefore the guideline will not be changed at this point.

There were some concerns that the guideline may generalise the workplace setting. Similarly, it was pointed out that many lower paid occupations are inherently more physically active. Recommendation 2 already makes reference to tailoring information according to working practices, taking into account shift work for example. Furthermore, part of recommendation 3 states "take account of the nature of the work and any health and safety issues. For example, many people already walk long distances during the working day, while those involved in shift work may be vulnerable if walking home alone at night" which demonstrates how the guideline takes into account different working environments and work patterns. However, we will monitor this area and review at the next surveillance point.

A policy paper highlighted several interventions to increase physical activity in the workplace such as incentive schemes and signposting which are consistent with the current recommendations. Other interventions listed include team-based activities with friendly competition, reimbursement for cycle hire, cycle parking and shower facilities which are not covered in the guideline. We did not find any further evidence on team-based activities or reimbursement for cycle hire, however this area will be monitored and considered at the next surveillance. Providing cycle parking and shower facilities are interventions relevant to NICE guideline NG90 on physical activity and the environment and will be considered there at the next surveillance review.

In summary, there was a range of evidence identified on interventions to increase physical activity in the workplace. Most of the intervention components are broadly covered by the current recommendations, which means that there is unlikely to be an impact on the guideline. We will monitor the area of sit-stand work stations and long-term impacts of incentive schemes and review again at the next surveillance point.

New evidence is unlikely to change guideline recommendations.

Recommendation 4: supporting employers

Who should take action?

- Directors of public health, public health practitioners in the statutory and voluntary sectors.

- Local strategic partnerships.
- Private, statutory and voluntary organisations with responsibility for increasing physical activity levels or for occupational health.
- Trades unions, business federations, chambers of commerce.

What action should they take?

- Offer support to employers who want to implement this guidance to encourage their employees to be more physically active. Where appropriate and feasible, this should be provided on the employer's premises. It could involve providing information on, or links to, local resources. It could also involve providing advice and other information or resources (for example, the services of physical activity experts).
- If initial demand exceeds the resources available, focus on:
  - enterprises where a high proportion of employees are from a disadvantaged background
  - enterprises where a high proportion of employees are sedentary
  - small and medium-sized enterprises.

Surveillance decision

This recommendation should not be updated.

Supporting employers

2018 surveillance summary

No new evidence was identified.

Intelligence gathering

A topic expert raised concerns about the recommendation to focus on small and medium-sized enterprises (SMEs) if initial demand for support exceeds the resources available. They mentioned that this may no longer be realistic criteria, given the increase in SMEs seen in recent years. It was also suggested that the guideline make reference to Local Enterprise Partnerships (LEPs) under the 'Who should take action?' heading of recommendation 4.

Impact statement

Although we did not find any evidence relating to this section of the guideline, we did receive some feedback from topic experts. There was a concern that the recommendation to focus on SMEs if resources are limited may no longer be realistic given the increase in SMEs since the guideline was published. Focussing on SMEs is 1 of the 3 suggestions in this

recommendation on how to deal with limited resources. Whilst it is acknowledged that this might not be a preferred option to some regions, it was felt that it could still be a relevant suggestion to others. Therefore it is unlikely that the recommendations will be impacted.

Since the guideline was first published, LEPs have been in introduced which help lead economic growth and job creation in a specific local authority area. It was felt that these would be covered by local strategic partnerships already mentioned under 'Who should take action?' therefore the recommendation is unlikely to be impacted.

New evidence is unlikely to change guideline recommendations.

Research recommendations

RR – 01 How is the effectiveness of workplace physical activity interventions influenced by the characteristics (for example, age, ethnicity, gender, socioeconomic status or disability) of employees?

Summary of findings

No new evidence relevant to the research recommendation was found and no ongoing studies were identified.

Surveillance decision

This research recommendation will be considered again at the next surveillance point.

RR – 02 How is the effectiveness of workplace physical activity interventions influenced by the size of the workplace and the type of occupations involved?

Summary of findings

No new evidence relevant to the research recommendation was found and no ongoing studies were identified.

Surveillance decision

This research recommendation will be considered again at the next surveillance point.

RR – 03 Do employer schemes to encourage employees to walk or cycle to work increase the individual's overall level of physical activity? For example, does an increase in the use of transport involving physical activity to commute to work lead to a decrease in other types of physical activity? Or is there an overall net increase in the individual's physical activity levels?

Summary of findings

No new evidence relevant to the research recommendation was found and no ongoing studies were identified.

Surveillance decision

This research recommendation will be considered again at the next surveillance point.

RR – 04 To what extent do employers benefit from increased productivity and reduced sickness absence if their employees become more physically active?

Summary of findings

No new evidence relevant to the research recommendation was found and no ongoing studies were identified.

Surveillance decision

This research recommendation will be considered again at the next surveillance point.

RR – 05 How effective are incentive schemes at increasing workplace physical activity levels?

Summary of findings

New evidence relevant to this research recommendation was found but an update in this area is not planned.

The new evidence suggests that various incentive schemes may be effective in increasing physical activity in the workplace, however evidence on the long term effects is inconsistent.

Surveillance decision

This research recommendation will be considered again at the next surveillance point.

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