NIHR public health research programme: Project 13/117/01

1. Project title

The effectiveness and cost effectiveness of an employer-led intervention to increase walking during the daily commute: Cluster randomised controlled trial

2. Research objectives

The overall aim of the research is to examine the effectiveness and cost effectiveness of an employer-led scheme to increase walking during the daily commute. The objectives are:

- To recruit and train workplace-based Walk to Work promoters
- To provide evidence of:
    - Participating employees' moderate to vigorous physical activity (MVPA)
    - Participating employees' overall levels of physical activity (cpm);
    - Modal shift (number of days, over the previous five working days, when walking was the major mode of travel to/from work)
    - Temporal pattern of physical activity (to identify when activity has increased and whether there is a compensatory decrease in activity at other times)
    - Physical activity associated with the journey to and from work
- To assess intervention costs to participating employers and employees
- To provide evidence on the cost and economic benefits of the intervention to employers, employees and society (commuting costs, health service use, presenteeism, absenteeism, capabilities)
- To explore with employers and employees the barriers to, and facilitators of, employer-led schemes to promote walking during the daily commute
- To explore any social patterning in increased walking particularly in relation to socio-economic status, age and gender

3. Research design

DESIGN. Cluster randomised controlled trial incorporating process and economic evaluations.
SETTING. The study will take place in 84 workplaces in Bath, Swansea and South Gloucestershire. The intervention will be implemented in 42 workplaces; 42 similar workplaces will comprise the control arm.
WORKPLACE RECRUITMENT. Workplaces will be approached through the appropriate Chambers of Commerce (who are collaborators for the study) for initial expressions of interest, including willingness to allocate employee time for study activities. There will be two rounds of recruitment (March 2014 and March 2015).
RANDOMISATION. Employers/managers in workplaces expressing an interest will be asked to complete a short questionnaire to enable purposive sampling of matched pairs, with each pair containing workplaces as similar as possible with respect to: total employees (up to 50, 51-250, 250+); location characteristics, and; type of business. Assignment of workplaces to the intervention group, within each matched pair, will employ computer generated allocation.

4. Study population

PARTICIPANTS. Employees in workplaces in Bath, Swansea and South Gloucestershire.
EXCLUSION CRITERIA. Employees who always walk or cycle to work. Employees who are disabled in relation to walking to work, and employees whose job involves regular driving throughout the day (for example, delivery drivers or sales representatives who set off from home in the work vehicle) will also be excluded. Workplaces with a large proportion of staff on short-term or zero-hours contracts are not suited because of the need for a one-year follow-up data collection. Employees who are retiring before the one year follow-up data collection will also be excluded. In addition, workplaces with firm plans to significantly downsize or relocate during the study period will be excluded.

5. Planned interventions

There are three main stages of the intervention:

- Workplace 'Walk to Work promoters' will be identified (volunteers, or nominated by participating employers, with an interest in walking and the capacity, within their usual role in the workplace, to promote walking amongst their colleagues). The Walk to Work promoters will be trained (at a group external event or on site, as appropriate to the needs of the workplace) by expert members of the research team about the health, social, economic and environmental benefits of walking during the daily commute and how to promote increased walking either by walking the entire route (mainly those within two miles of the workplace) or mixing walking with public transport or 'park and walk'. They will be given resource packs and trained to access relevant websites and toolkits
- Participating employees will be contacted by the Walk to Work promoter and will be given a Walk to Work pack including a booklet and pedometer. The benefits of increased walking will be discussed; barriers and solutions discussed, and; safe, feasible routes identified. Goals for incorporating walking in the journey to and from work will be set.
- Further encouragement will be provided through four contacts from the Walk to Work promoter over the following 10 weeks (face-to-face, email or telephone as appropriate). During this time the Walk to Work promoters will also be prompted and encouraged in their role by four email/telephone contacts.

Additional booklets will be provided for employers/managers with information and ideas of how the workplace can support increased walking during the daily commute.

6. Evaluation methods proposed

OUTCOME EVALUATION. Accelerometers, GPS receivers and travel diaries will be used at baseline (DC1) and at one year follow-up (DC3). Behavioural questionnaires will be used at DC1, immediately post intervention (DC2) and DC3. Accelerometers will be worn on a belt around the waist for 7 days from early morning until going to bed to record physical activity. The GPS receivers will be worn on the same belt, or carried in a pocket or bag, and switched on during the daily commute to record location and speed at 10 second intervals.
PROCESS EVALUATION. The context, delivery and receipt of the intervention will be examined from the perspectives of employers, Walk to Work promoters and employees using evaluation forms at key stages of the trial, and interviews with a purposive sample of employers and employees immediately post intervention.
ECONOMIC EVALUATION. The costs of the intervention will be assessed by recording time, materials and expenses used in training the promoters and implementing the intervention with employees. Costs to participants will be assessed by recording journey time, household commuting costs and expenses at DC1 and DC3 using travel diaries developed during the feasibility study. Presenteeism, absenteeism and health service use will be recorded using employee-completed questionnaires at DC1 and DC3. Overall absentee rates will also be collected from employers. Employee wellbeing will be measured using the ICECAP-A questionnaire and presented alongside costs in a cost-consequence table.

7. Proposed outcome measures

PRIMARY OUTCOMES

- Daily minutes of moderate to vigorous physical activity (MVPA)

SECONDARY OUTCOMES

- Overall levels of physical activity (cpm)
- Daily minutes of sedentary time
- Modal shift (number of days, over the previous five working days, when walking was the major mode of travel to/from work)

PROCESS OUTCOMES

- Facilitators and barriers to workplace/employer participation in walk to work interventions
- Facilitators and barriers to employees walking during the daily commute
- Physical activity/MVPA due to walking during the journey to/from work

ECONOMIC EVALUATION OUTCOMES

- Costs to employers, employees and the public sector of implementing the walk to work scheme
- Consequences for the employer; absenteeism/presenteeism.
- Consequences for employees; commuting costs and wellbeing
- Consequences for the public sector; health service use.

8. Project timetable

The study will take 33 months. There will be two phases of recruiting workplaces and participants, Jan-Jun 2015 and Jan-Jun 2016. The study is structured so that baseline and one-year follow-up data collections for specific workplaces fall within the same season.