

Appraisal

Critically appraised paper: A 12-week pedometer-based intervention, delivered in primary care, produces long-term gains in physical activity

Synopsis

Summary of: Harris T, Kerry SM, Limb ES, Furness C, Wahlich C, Victor CR, et al. Physical activity levels in adults and older adults 3–4 years after pedometer-based walking interventions: Long-term follow-up of participants from two randomised controlled trials in UK primary care. *PLoS Med.* 2018;e1002526.

Question: Does a short, multi-component intervention that targets walking change physical activity 3 or 4 years after baseline measures?

Design: Two randomised controlled trials (PACE-UP and PACE-Lift) that used concealed allocation. **Setting:** Ten primary care practices in the United Kingdom. **Participants:** Adults aged either 45 to 75 years (PACE-UP) or 60 to 75 years (PACE-Lift), who were able to walk outside and had no contraindications to increasing their physical activity. For PACE-UP, randomisation allocated 339 participants to the multi-component intervention, 346 to the same intervention plus nurse consultations, and 338 to a usual care group. For PACE-Lift, randomisation of 298 participants allocated 150 to the multi-component intervention plus nurse consultations, and 148 to a usual care group.

Interventions: The multi-component intervention included a pedometer, keeping a step-count diary, 12 weeks of goal setting, and a handbook that included behaviour change techniques. Nurse consultations consisted of three or four consultations, each 20 to 45 minutes in duration. Control groups received usual care from their practice. At the end of the first 12-month follow-up, participants in the control group were provided with a pedometer and instructions for its use,

with no further support. **Outcome measures:** The primary outcome was physical activity measured using the Actigraph GT3X+. **Results:** In both trials, follow-up was > 85% at 12 months but not longer term. In the PACE-UP study, at the 3-year follow-up, compared with the control group, both the intervention group that included nurse consultations and the one that did not demonstrated an increase in average daily step count (MD 627 steps/day, 95% CI 198 to 1056 and MD 670 steps/day, 95% CI 237 to 1102, respectively). In the PACE-Lift study, at the 4-year follow-up, there was no difference between the intervention and control groups regarding average daily step count (MD 407 steps/day, 95% CI –177 to 992), but the intervention group spent more time in bouts of moderate-to-vigorous-intensity physical activity that exceeded 10 minutes (MD 32 minutes, 95% CI 5 to 60). **Conclusion:** A 12-week intervention, that included a pedometer, diary goal setting and handbook, produced sustained improvement in some measures of physical activity after 3 to 4 years.

Provenance: Invited. Not peer reviewed.

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Commentary

If physiotherapists are not thinking about their contribution to the inactivity crisis, they should be! Inactivity cannot be addressed by any single committee, organisation or initiative; it is a complex phenomenon and there are no silver-bullet solutions. Progress requires sustained, system-wide action, and as healthcare professionals we have an important role to play.

People who report poor health are significantly more likely to do no physical activity¹ and are likely to have many touchpoints with healthcare and social care systems. If each one of those touchpoints was fully utilised to support effective physical activity interventions, the impact would be substantial. Such interventions need to be both effective and pragmatic, and it can be challenging to identify interventions that can be integrated into busy primary care consultations. Evidence to date has largely focused on brief counselling interventions, and the understanding of effectiveness has been limited by short-term follow-up.²

The findings from this study illuminate the potential of pragmatic (time and resource efficient), pedometer-based interventions to impact on activity levels over more extended time frames. This highlights novel delivery models that may be concurrent with an episode of care, but not necessarily delivered in a traditional, face-to-face manner within consultations. There are obvious efficiency benefits here and it is our challenge as physiotherapists to think broadly

and creatively about how we can integrate emerging evidence into practice.

The natural overlap between rehabilitation and physical activity presents an opportunity for physiotherapists to respond to this major public health issue. Our challenge is to move physiotherapy public health practice forwards to consider how we can systematically deliver upstream interventions that have the potential to improve patients' long-term wellbeing.

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References

1. Hunter RF, et al. *Prev Med.* 2015;72:64–69.
2. Lamming L, et al. *Prev Med.* 2017;99:152–163.