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Blake, Holly and Suggs, L.S. and Aguirre, L. and Tennyson, R. and Zhou, D. and Batt, Mark E. (2013) Technology-based intervention to promote physical activity in a UK healthcare workplace in June-Sept 2012. *European Journal of Public Health*, 23 (S1). p. 134. ISSN 1464-360X

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Technology-based intervention to promote physical activity in a UK healthcare workplace in June-Sept 2012

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Citation: BLAKE, H, SUGGS, L.S., AGUIRRE, L, TENNYSON, R, ZHOU, D and BATT, M.E., 2013. Technology-based intervention to promote physical activity in a UK healthcare workplace in June-Sept 2012 In: Eur J Public Health; 23 (suppl 1): ckt126.330 doi:10.1093/eurpub/ckt126.330.

Background: Promoting physical activity in the workplace, particularly in healthcare settings, is advocated both in the United Kingdom and internationally. Technology-based interventions have shown promise, but most studies comparing channels for health communication provide different messages via those channels. It is not known if the effects are due to the channel or the message.

Methods: In a randomised controlled trial design, 296 healthcare employees from a hospital workplace in the United Kingdom (19-67 years; mean=38.78; SD=10.25) participated in a 12-week motivational messaging intervention designed to promote physical activity. Messages were tailored using Theory of Planned Behaviour and delivered twice per week via short-message service (SMS) (n=148) or email (n = 148). All messages were limited to 160 characters. Data were collected online at four time points (baseline, six weeks, 12 weeks and 16 weeks). Outcomes included physical activity behaviour and

health-related quality of life.

Results: For the full sample, active travel (cycling or walking for transport) significantly increased in frequency during the intervention (mean days/week=5.64) compared to baseline (4.83 days) and this increase was sustained at immediate follow-up (5.35 days) and one month after the intervention (5.25 days). Participants spent significantly more time per day on active travel during the intervention (mean=1.57 hours) at immediate follow-up (2.90 hours) and one month after the intervention (1.27 hours) compared to baseline (0.60 hour). Decreases in sedentary behaviour were also observed during the intervention (mean = 5.46 hours) and immediately after the intervention (5.47 hours) compared to baseline (6.19 hours) although this was not maintained one month after the intervention (6.52 hours). This intervention did not demonstrate any improvement in health-related quality of life. No significant differences in outcomes were observed between the email and SMS groups.

Conclusions: Technology-based messaging can increase frequency and duration of active travel in healthcare employees, which is sustained once the intervention ends. Reductions in sedentary behaviour can also be achieved in the short-term although maintaining this change may require longer term messaging. SMS and emails appear to be equally effective as channels of health communication.

Key messages:

- Technology-based motivational messaging can increase cycling and walking for travel in healthcare employees.
- SMS and emails appear to be equally effective as channels of health communication.