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### **Motive8! Text Messaging Intervention to Promote Physical Activity in Knee Osteoarthritis**

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**Aim:** To develop and test the feasibility of using a SMS text messaging intervention to promote physical activity in patients with knee OA.

**Methods:** 27 people (6 male, 21 female; aged 25-81 years) with knee osteoarthritis received 4 text messages per week, for 6 weeks and completed physical activity diaries. Telephone surveys were conducted at baseline and 6 weeks to measure physical activity levels and beliefs, including self-efficacy for exercise, barriers and benefits of exercise, social support and pain. Process evaluation included participant perceptions of the intervention and 'real-time' data on intervention fidelity and participant engagement.

**Results:** 648 messages were sent, 100% were accurately delivered. From baseline to 6 weeks, physical activity, self-efficacy for exercise, perceived benefits of exercise and social support significantly increased; reductions were observed in barriers to exercise and pain. Participants engaged with the intervention; 100% read the messages, 89% responded to texts requesting replies, 64% completed physical activity diaries with low attenuation (1.8% drop) by six weeks. Participants perceived messaging to be enjoyable (96%), personally relevant (85%), of appropriate frequency (100%) and duration (88%).

**Conclusions:** People with knee osteoarthritis can engage meaningfully with an interactive mobile phone messaging intervention over a six-week period. Health communications promoting physical activity demonstrate potential for behaviour change and positive implications for perceptions of exercise and pain. Data collected in 'real-time' can be used for process evaluation to demonstrate participant engagement and intervention fidelity.