

Text messages with financial incentives for weight loss in men with obesity

Insights from the Game of Stones trial

Obesity is associated with poor health outcomes, estimated to cost the NHS across the devolved nations a total of £6.5 billion a year, with a wider societal cost to the UK of £58 billion¹. Addressing obesity aligns with the UK Government's focus on improving public health², preventing disease³, and reducing the burden on health services².

Approximately 26% of men in the UK are living with obesity⁴. However men are under-represented in weight loss trials and are less likely than women to attend traditional weight management groups. Those from lower socio-economic backgrounds are less likely to engage in healthy behaviours relating to diet and physical activity and also less likely to access existing services⁵. A large-scale randomised controlled trial, Game of Stones, conducted across 3 UK nations has concluded that text messages with financial incentives can help men who are living with obesity to lose weight, and address health inequalities for underserved populations.

1. [The annual social cost of obesity in the UK | Frontier Economics \(frontier-economics.com\)](https://www.frontier-economics.com/obesity-cost-uk)
2. [Secretary of State makes economic growth a priority - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/news/secretary-of-state-makes-economic-growth-a-priority)
3. [The King's Speech 2024 - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/speeches/the-king-s-speech-2024)
4. [Obesity Profile: short statistical commentary May 2023 - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/statistics/obesity-profile-short-statistical-commentary-may-2023)
5. [Health disparities and health inequalities: applying All Our Health - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/statistics/health-disparities-and-health-inequalities-applying-all-our-health)

Key findings

- Men offered daily supportive text messages and financial incentives to meet weight loss targets lost significantly more weight over 12 months than men put on a waiting list to receive text messages. The results were the same when men taking weight loss medication or meal replacements were removed from the analysis.
- Men offered the text messages alone did not lose significantly more weight compared to the control group.
- Four men would need to enrol in Game of Stones for one man to lose $\geq 5\%$ of their starting weight at 12 months. Five men would need to enrol for one man to lose $\geq 10\%$ of their starting weight at 12 months.
- 46% of men in the group offered financial incentives met some or all of their targets and received money, with an average payment of £128. 14% of men received the full £400 available by meeting or exceeding all targets: $\geq 5\%$ weight loss at 3 months; $\geq 10\%$ weight loss at 6 months and maintain $\geq 10\%$ weight loss at 12 months.
- Taking part in the study did not negatively impact on men's mental health, well-being or weight stigma scores.
- Text messages with financial incentives worked just as well for men living with multiple long-term conditions, disabilities or mental health conditions as it did for those living without. It also worked just as well for men from more disadvantaged areas compared to those from more advantaged areas.
- The study appealed to those usually underserved by health promotion activities:
 - Men with average age of 51 years;
 - 39% lived in more disadvantaged areas;
 - 29% reported a disability;
 - 40% had multiple long-term conditions;
 - 25% had been diagnosed with a mental health condition, with a further 24% scoring low on measures for mental health.

Study

Game of Stones recruited 585 men living with obesity in and around Belfast, Bristol and Glasgow between July 2021 and May 2022 through GP practices, social media or information stands and posters in the community. Participants were randomly assigned to one of three groups: text messages with financial incentives, text messages alone or waiting list (control). Text messages were automated and sent daily for 12 months. They incorporated a range of behaviour change strategies and were designed with men. Those assigned to the text messages with financial incentives group were told that £400 had been put aside for them but money would be lost if weight targets were missed. The targets were 5% weight loss at 3 months, 10% at 6 months, and maintaining that 10% loss at 12 months. The men assigned to the text messaging alone group received the same text messages and targets but were not offered financial incentives for weight loss.

Recommendations

- Text messages with financial incentives could be an effective complementary addition to weight loss services for men and could help address health inequalities.
- The 5% weight loss at 12 months is greater than more intensive behavioural weight management interventions currently offered in primary care.
- Game of Stones is ready to scale up at a relatively low cost with minimal burden on the NHS and patients – only 4 brief weigh-ins required over 1 year with minimal staff training required, compared to a minimum of 12 sessions currently recommended for primary care weight management programs.

About this research

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Further details on methods used in the study are also available in the published protocol:
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