Analysis of bedside entertainment services' effect on post cardiac surgery physical activity: a prospective, randomised clinical trial

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Background: A rising number of acute hospitals in the UK have been providing patients with bedside entertainment services (BES) since 1995. However, their effect on postoperative patient mobility has not been explored. **Objectives:** The aim of this prospective randomised clinical trial was to compare the level of postoperative physical activity and length of in-hospital stay of patients undergoing cardiac surgery depending on whether they had access to BES or not.
Methods: One hundred patients requiring elective cardiac surgery were randomised to receive access to BES (52 patients) or not (48 patients). Pedometers were used to quantify postoperative physical activity for 5 days. To assess the significance of the effect of intervention (TV off or on) on the pedometer counts over time a mixed effect Poisson regression model is used, with the time varying aspect as random component. The potential influence of gender difference and age on pedometer counts were assessed by incorporating these two factors as covariates in the Poisson model.
Results: On average, patients with no access to BES walked more than those with BES access. This difference ranged between 192 and 609 steps in favour of the first group for each individual postoperative day. Patients with no access to BES were 84% more likely (risk ratio: 1.84, 95% CI: 1.29–2.63) to walk higher number of steps than patients with access to BES. On average, participants with access to BES were likely to stay longer in hospital (median of 7 days with interquartile range 6–7 days), than participants with no access to BES (median of 6 days with interquartile range 5–7 days), however the difference did not reach statistical significance.
Conclusion: We have demonstrated that the bedside entertainment systems may have an adverse effect on post cardiac surgery patient ambulation and may contribute to an increase in hospital stay.