Oral health education in cardiac rehabilitation, a randomised controlled trial.

Lauren Church[1,2], Shalinie King[1,2], Simone Marschner[2], Robert Zecchin[1,3], Nikki Barrett[1], Tanya Kumar[1], Axel Spahr[1], Clara K Chow[1,2,3]

[1]The University of Sydney, Sydney, Australia. [2]Westmead Applied Research Centre, Sydney, Australia. [3]Westmead Hospital, Department of Cardiology, Westmead, Australia

Abstract

The aim of this study was to determine if digital technology alone or in combination with traditional oral health messaging is effective in improving the oral hygiene status of patients attending cardiac rehabilitation.

A randomised, parallel design, single blind, clinical trial was undertaken within Australian public hospitals. Eligible participants were randomised into a 1:1:1 ratio into either: Group A) individualised oral hygiene instruction (OHI) combined with a digital oral health education (DOHE) package, Group B) DOHE alone, and Group C) usual care/control – no oral health education. Clinical assessments and self-report questionnaires were completed at baseline, 6- and 12-weeks. The primary outcome was comparing approximal plaque index (API) reduction 6-weeks from baseline, between OHI+DOHE and usual care. Secondary outcomes included API reduction at each follow-up across all study groups, self-reported changes in oral hygiene behaviours, knowledge, confidence, and motivation.

A total of 158 were randomised (mean age 62 ± 11 years; 82% male). At 6-weeks, 77.1% of participants receiving OHI+DOHE showed a reduction in API, compared to 26.8% receiving usual care (odds ratio (OR) 9.16, 95% CI: 3.34-27.75, $p<0.001$). Participants receiving DOHE alone showed similar reductions at 6 weeks compared to usual care (OR 4.72, 95% CI: 1.88-12.5, $p<0.001$). Self-reported outcomes also improved, with no adverse events detected.

Oral health education provided to patients attending cardiac rehabilitation out-patient clinics using face-to-face and/or digital media effectively improves oral hygiene, behaviours and knowledge. The findings of this trial support integrating oral health interventions into cardiac care to enhance patient outcomes.