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Healthy Rural Hearts: efficacy of a dietary telehealth program for rural people at risk of heart disease

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Current clinical guidelines for people at risk of heart disease in Australia recommend nutrition intervention in conjunction with pharmacotherapy(1). However, Australians living in rural and remote regions have less access to medical nutritional therapy (MNT) provided by Accredited Practising Dietitians (APDs) than their urban counterparts(2). The aim of the HealthyRHearts study was to trial the delivery of MNT by APDs using telehealth to eligible patients of General Practitioners (GPs) located in small to large rural towns in the Hunter New England region(3) of New South Wales, Australia. The study design was a 12-month pragmatic randomised controlled trial. The key outcome was reduced total cholesterol. The study was place-based, meaning many of the research team and APDs were based rurally, to ensure the context of the GPs and patients was already known. Eligible participants were those assessed as moderate-to-high risk of CVD by their GP. People in the intervention group received five MNT consults (totalling two hours) delivered via telehealth by APDs, and also answered a personalised nutrition questionnaire to guide their priorities and to support personalised dietary behaviour change during the counselling. Both intervention and control groups received usual care from their GP and were provided access to the Australian Eating Survey (Heart version), a 242-item online food frequency questionnaire with technology-supported personalised nutrition reports that evaluated intake relative to heart healthy eating principles. Of the 192 people who consented to participate, 132 were eligible due to their moderate-to-high risk. Pre-post participant medication use with a registered indication(4) for hypercholesterolemia, hypertension and glycemic control were documented according to class and strength (defined daily dose: DDD)(5). Nine GP practices (with 91 participants recruited) were randomised to the intervention group and seven practices (41 participants) were randomised to control. Intervention participants attended 4.3 ± 1.4 out of 5 dietetic consultations offered. Of the132 people with baseline clinical chemistry, 103 also provided a 12-month sample. Mean total cholesterol at baseline was 4.97 ± 1.13 mmol/L for both groups, with 12-m reduction of 0.26 ± 0.77 for intervention and 0.28 ± 0.79 for control ($p = 0.90$, unadjusted value). Median (IQR) number of medications for the intervention group was 2 (1–3) at both baseline and 12 months ($p = 0.78$) with 2 (1–3) and 3 (2–3) for the control group respectively. Combined DDD of all medications was 2.1 (0.5–3.8) and 2.5 (0.75–4.4) at baseline and 12 months ($p = 0.77$) for the intervention group and 2.7 (1.5–4.0) and 3.0 (2.0–4.5) for the control group ($p = 0.30$). Results suggest that medications were a significant contributor to the management of total cholesterol. Further analysis is required to evaluate changes in total cholesterol attributable to medication prescription relative to the MNT counselling received by the intervention group.

References

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