ABSTRACTS

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A Cost-effectiveness Analysis of Genetic Testing in the Evaluation of Families with Hypertrophic Cardiomyopathy

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Background: Traditional management of families with hypertrophic cardiomyopathy (HCM) involves periodic lifetime clinical screening, an approach that does not identify all gene carriers. Cost limitations have meant genetic testing is not part of routine management. This study sought to determine the cost-effectiveness of the addition of genetic testing to HCM family management, compared to clinical screening alone.

Methods: A probabilistic Markov decision model was used to determine cost per quality-adjusted life-year (QALY) and cost per life-year gained (LYG) when genetic testing is included in the management of families with HCM, compared to the conventional approach of periodic clinical screening alone.

Results: The incremental cost-effectiveness ratio (ICER) was $AUD785 per QALY gained, and $AUD12,720 per additional LYG making genetic testing a very cost-effective strategy. Sensitivity analyses showed that as the cost of proband genetic testing decreased, the ICER decreased and was cost saving when the cost fell below $AUD248. In addition, the mutation identification rate and the number of family members who would potentially utilise predictive genetic testing were also important in reducing the overall ICER, although even at their upper limits, the ICER still fell well within accepted willingness to pay bounds. Probabilistic sensitivity analysis found 78% probability of cost-effectiveness when the willingness to pay threshold was set to $AUD50,000.

Conclusions: The addition of genetic testing to the management of HCM families is cost-effective when compared to the conventional approach of regular clinical screening. This has important implications, and suggests all families should have access to specialised cardiac genetic clinics that can offer genetic testing.

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Efficacy of a Pharmacist-Managed Intervention for Improved Blood Pressure Control in Patients with Elevated Cardiovascular Disease Risk: Subgroup Analysis of the HAPPY RCT

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The Hypertension Adherence Program in Pharmacy (HAPPY) was a randomised controlled trial conducted in 60 Australian community pharmacies. The project compared changes to medicines adherence and blood pressure (BP) in a Pharmacist Care Group (PCG, receiving a multifaceted intensive intervention; $n = 207$) with those observed in a Usual Care Group (UCG; $n = 188$). The objective of this study was to analyse changes at six months to BP and self-reported medicines adherence among participants at elevated cardiovascular disease risk. Patients with diabetes, coronary heart disease, stroke or kidney disease were included. Half the participants (200/395) met eligibility criteria (high CVD risk status, BP data and self-reported adherence data). The only significant difference between groups at baseline was total number of medicines (PCG 6.8 vs. UCG 5.9; $p = 0.03$); other relevant social, demographic and clinical variables were comparable. Forty-two percent were nonadherent at baseline and average BP was 141.8/82.5 mm Hg. At six months, systolic BP improved significantly for PCG participants compared with UCG participants [−10.9 (95% CI −15.1 to −6.7) mm Hg vs. −2.8 (95% CI −7.7 to 2.0) mm Hg; $p = 0.013$]. Diastolic BP improved significantly only within the PCG (−4.2, 95% CI −6.8 to −1.5). Within-group UCG improvements to diastolic BP were not statistically significant (−2.7, 95% CI −5.3 to −0.13), nor were differences between groups ($p = 0.44$). No significant between-group differences were observed for medicines adherence. The intervention achieved reductions in BP that were statistically and clinically significant. Findings support previous evidence that pharmacist interventions deliver significant BP improvements.

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