Preliminary results of the IMPRESS study: Reducing cardiovascular risk factors in a nurse-led primary intervention program for high risk participants

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Purpose
Atherosclerotic heart disease is the leading cause of death in adult Australians¹, the risk factors for which are known.

The combined effect of risk factors are used to assess cardiovascular disease (CVD) risk with the 5-year Framingham Risk Score (FRS).

Many individuals with lower (calculated) FRS still represent a higher risk group who would benefit from prevention, such as those with a family history of premature CVD.

Combined FRS and identification of sub-clinical atherosclerosis by carotid intima-media thickness (CIMT) measurement may improve selection of individuals for active treatment.

Hypothesis:
The Intima-Media thickness guidance of Primary prevention in Relatives of individuals with Early onset atherosclerosis (IMPRESS) Study (IMPRESS) will provide a greater reduction in atherosclerotic burden and modifiable risk factors for CVD in the intervention group compared to usual care.

Methods
A multi-centre, randomised controlled study identified 40-65 year old adults with a family history of premature CVD.

Individuals with increased CIMT and low (<9%) FRS or a moderate FRS (10-15%) were eligible.

Participants were randomised to usual care or a nurse-led primary prevention clinic to implement an adaptable traffic light system² which titrates the intensity of management, comprising diet and lifestyle modification in conjunction with statin therapy (if needed).

Results
Of 1,260 individuals screened, 355 (28%) were randomised to usual care (n=182) or the IMPRESS intervention (n=173).

Average age was 53 ± 7 years and 44% male.

At 3 months, improvements were seen in many risk factors from 105 intervention participants requiring high risk (“red”) management.

Conclusions
Around 1 in 4 individuals with a family history of premature CVD had sub-clinical atherosclerosis, despite not being classified as high risk on FRS.

Early results confirm the potential of the IMPRESS intervention to reduce their CVD risk.

References

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