Appendix 1. TIDieR Checklist

Intervention described according to the TIDieR guidelines

Item		Control Group	Implementation Strategy Group
1	**BRIEF NAME:** Provide the name or a phase that best describes the intervention	Historical usual care model group	Primary-tertiary shared care model group
2	**WHY:** Describe any rationale, theory, or goal of the elements essential to the intervention.	The usual care model involves previous patients referred to the Vascular Health Clinic by general practitioners (GPs), cardiologists, endocrinologists, or other medical professionals with suspected or clinically diagnosed FH. This will serve as a pragmatic reference standard for the implementation research.	The primary-tertiary shared care model involves patients referred to the Vascular Health Clinic by GPs, cardiologists, endocrinologists, or other medical professionals with suspected or clinically diagnosed FH and their relatives who are transitioned through the new model of care. The co designed shared care model will lead to increased genetic testing for FH by providing appropriate support, guidance and clear communication between general practice and tertiary hospital clinics.
3	**WHAT (**Materials): Describe any physical or informational materials used in the intervention, including those provided to participants or used in intervention delivery or in training of intervention providers. Provide information on where the materials can be accessed (e.g., online appendix, URL).	A confirmed index case in the usual care control group was offered a family letter to pass onto their relatives that suggested they contact genetic services at the clinic, or seek a referral to a local genetics service, if interested in learning more about cascade testing. The family letter included contact information for the Vascular Health Clinic.	A confirmed index case in the primary tertiary shared care model is offered a revised family letter to give to their relatives. The revised family letter includes contact information for the Vascular Health Clinic and a link to an online expression of interest form to find out more about cascade testing. In addition, the shared care model includes a cascade testing package which is provided to relatives and the relatives nominated GP. The cascade testing package includes the following: 1) a one-page cascade screening guide for the GP, 2) a prefilled pathology form, 3) a genetic testing consent form, 4) a patient FH factsheet, 5) links to GP resources and contact details for the Vascular Health Clinic for additional support. The revised family letter and cascade testing package can be found in the online supplemental Appendices 2 and 3. The shared care model also includes a post results package which is sent to the GP after results are returned. For a positive result, the package includes the following: 1) results letter for GP, 2) results letter for patient, 3) family letter, and 4) a FH registry consent form. A positive post result package can be found in the online supplemental material Appendix 4. GPs may contact the Vascular Health Clinic throughout the process for assistance via telephone or email.

Appendix 1. TIDieR Checklist

Intervention described according to the TIDieR guidelines *(continued)*

Item		Control Group	Implementation Strategy Group
4	**WHAT** (Procedures): Describe each of the procedures, activities, and/or processes used in the intervention, including any enabling or support activities.	In the usual care group, patients with suspected or clinically diagnosed FH (i.e., index case) are provided a clinic appointment with a lipid specialist and genetic counsellor to discuss FH and genetic testing. Pre-test genetic counselling is provided to those who consent to genetic testing, which includes a discussion about the possible results and potential benefits of testing. On an individual patient basis (e.g., patients interested in genetic testing) the genetic counsellor spoke about risk to family members, discussed cascade testing, and provided a family letter, when relevant. Once results were returned to the clinic, an appointment was arranged with the genetic counsellor in person or by telephone, depending in the patient's preference, for post-test genetic counselling. Post-test counselling includes reminding patients to notify their at-risk relatives if a positive genetic variant was found. This may also include offering a family letter that encourages relatives to arrange an appointment with the genetic counsellor at the clinic, or with their local genetic services. If the relative did seek a referral to the Vascular health Clinic they would be put on a waitlist. They would then have an appointment with the genetic counsellor to discuss cascade testing. Following testing a letter would be written back to their referring doctor with the result and advice for patient and family members.	In the primary tertiary care group, patients with suspected or clinically diagnosed FH (i.e., index case) are provided a clinic appointment with a lipid specialist and genetic counsellor to discuss FH and genetic testing. Pre-test genetic counselling is provided to those who consent to genetic testing, which includes a discussion about the possible results and potential benefits of testing. The genetic counsellor will talk about risk to family members, discuss cascade testing and provide the revised family letter during the pre-test counselling appointment on an individual patient basis. Once results are returned to the clinic an appointment is arranged with the genetic counsellor, in person or by telephone, who provides post-test genetic counselling. This includes providing the revised family letter if they were not provided at the pre-test counselling or reminding patients to notify their at-risk relative (s) if a positive genetic variant was found. The relative completes an expression of interest form and is then contacted by the Vascular Health Clinic to discuss cascade testing. They are emailed, or mailed, the cascade testing package, which is also sent to the relatives nominated GP. The package includes all information needed by the GP to conduct cascade testing of first degree relatives. The relative undergoes genetic testing through their GP by providing either a saliva or blood sample. The sample is returned to hospital pathology. Results of the test are sent from NSW Pathology, or other testing laboratory, to the Vascular Health Clinic and the relative's GP. The GP is then sent the post results package. GPs may contact the Vascular Health Clinic throughout the process for assistance via telephone or email.
5	**WHO PROVIDED:** For each category of intervention provider (e.g., psychologist, nursing assistant), describe their expertise, background and any specific training given.	The usual care model primarily includes clinic staff comprised of a lipid specialist, genetic counsellors, clinic nurse, and other healthcare providers, such as general practitioners, on an ad hoc basis.	The primary-tertiary shared care model includes staff in tertiary and primary care comprised of a lipid specialist, genetic counsellor, clinic nurse, pathologists, and general practitioners guided by a well-defined shared care pathway based on equal partnership between primary and tertiary care.

Appendix 1. TIDieR Checklist

Intervention described according to the TIDieR guidelines *(continued)*

Item		Control Group	Implementation Strategy Group
6	**HOW:** Describe the modes of delivery (e.g., face-to-face or by some other mechanism, such as internet or telephone) of the intervention and whether it was provided individually or in a group.	In the usual care model, patients seeking index testing or cascade testing would have a face-to-face clinic appointment, or have a telephone consultation to arrange testing, depending on the patient's preference (and whether they needed to come in for an appointment to see a specialist doctor). Depending on the patient's preference, and situation, the results would be discussed by phone or in clinic.	The primary-tertiary shared care model includes an initial individual face-to-face clinic appointment with the index case, a telephone appointment with relatives, and individual face-to-face visits in general practice between relatives and their GP. Follow up appointments for relatives to discuss results face-to-face with their GP, and further support is available via telephone and internet (i.e., email, internet resources) from the clinic.
7	**WHERE:** Describe the type(s) of location(s) where the intervention occurred, including any necessary infrastructure or relevant features.	The usual care model is conducted in a tertiary care setting (i.e., Vascular Health Clinic).	The intervention is conducted in the primary and tertiary care settings through general practice and the Vascular Health Clinic, respectively.
8	**WHEN and HOW MUCH:** Describe the number of times the intervention was delivered and over what period of time including the number of sessions, their schedule, and their duration, intensity or dose.	Between 2022 - 2023 of the usual care model at the Vascular Health Clinic, diagnosing one index patient took approximately three to four months (from genetic testing to return of results). If a relative was then interested in a referral for cascade testing, they were placed on an average 8 month wait list for the Vascular Health Clinic. The process then took approximately 8 to 12 weeks (from cascade genetic test to return of results). Following testing, a letter would be written back to their referring doctor with the result and advice for patient and family members.	An individual patient through the primary-tertiary shared care model begins with diagnosing one index patient which takes approximately 3 to 4 months (from genetic testing to return of results). This is followed by cascade testing for at risk relatives with the process depending on GP appointment availability (anticipated less than the vascular health clinic wait time of 8 months) which include two reminders to index case if an EOI is not received by their relative. Blood or saliva sample provided for genetic testing (approximately 8 to 12 weeks) and follow up with GP and the Vascular Health Clinic, as needed, to discuss results.
9	**TAILORING:** If the intervention was planned to be personalised, titrated or adapted, then describe what, why, when, and how.	The usual care model provides index cases with a family letter, and additional resources on FH which are provided during the initial clinic visit and can be accessed online https://www.athero.org.au/fh/patients/cholesterol-and-cardiovascular-disease/. Patients and their relatives are also able to contact the clinic as needed.	In addition to the revised family letter and additional resources on FH provided as per usual care, the primary-tertiary shared care model will be adapted and refined over the 12-month period based on initial feedback. The model with be tailored and may include additional information in the cascade testing package and further supports such as: indirect vs. direct contact of relatives; online health information portal for GPs (i.e., HealthPathways); a patient information booklet; a factsheet on FH with the NSW Centre for Genetics Education; continuous professional development (CPD) opportunities for GPs; a direct GP contact to the Vascular Health Clinic; utilising NSW Health Pathology or private pathology providers; genetic vs. phenotypic testing.

Appendix 1. TIDierR Checklist

Intervention described according to the TIDieR guidelines *(continued)*

Item		Control Group	Implementation Strategy Group
10	**MODIFICATIONS:** If the intervention was modified during the course of the study, describe the changes (what, why, when, and how).	Not applicable for protocol.	Not applicable for protocol.
11	**HOW WELL** (Planned): If intervention adherence or fidelity was assessed, describe how and by whom, and if any strategies were used to maintain or improve fidelity, describe them.	Adherence or fidelity will not be assessed in the usual care control group as an implementation strategy was not in place during the previous 12-month usual care period.	Whether or not the model is implemented as prescribed as measured by the number of people detected with FH will be explored in the 12-month period of the primary-tertiary shared care model.
12	**HOW WELL** (Actual): If intervention adherence or fidelity was assessed, describe the extent to which the intervention was delivered as planned.	Not applicable for protocol.	Not applicable for protocol.