Participant Information Sheet/Consent Form

Interventional Study - *Adult providing own consent*

[Insert site name]

Title	Use of Artificial intelligence-Guided echocardiography to assIst cardiovascuLar patient managEment
Short Title	AGILE-Echo study
Protocol Number	HREC/**87233**
Project Sponsor	Baker Heart and Diabetes Institute
Coordinating Principal Investigator/ Principal Investigator	Professor Tom Marwick
Associate Investigator(s)	Dr Leah Wright, Dr Quan Huynh, Prof Kaz Negishi, Prof Graham Hillis, Dr Ben Costello, Prof Sudhir Wahi, Prof Paul Scuffham, Dr Angus Baumann, Dr Chris Yu
Location	Baker Heart and Diabetes Institute, Dubbo Base Hospital, Alice Springs Hospital, Princess Alexandra Hospital, Royal Perth Hospital

Part 1 What does my participation involve?

1 Introduction

You are invited to take part in this research project. This because your doctor is considering arranging an ultrasound test of the heart (echocardiogram, "echo"). The study aims to identify whether a workflow based on echocardiogram done by a non-expert but guided by artificial intelligence (AI-echo) can identify heart valve and heart function problems quicker and as accurately as a standard echo.

This Participant Information Sheet/Consent Form tells you about the research project. It explains the tests and treatments involved. Knowing what is involved will help you decide if you want to take part in the research.

Please read this information carefully. Ask questions about anything that you don't understand or want to know more about. Before deciding whether or not to take part, you might want to talk about it with a relative, friend or your local doctor.

Participation in this research is voluntary. If you don't wish to take part, you don't have to. You will receive the best possible care whether or not you take part.

If you decide you want to take part in the research project, you will be asked to sign the consent section. By signing it you are telling us that you:
• Understand what you have read
• Consent to take part in the research project
• Consent to have the tests and treatments that are described

• Consent to the use of your personal and health information as described.

You will be given a copy of this Participant Information and Consent Form to keep.

2 What is the purpose of this research?

Exercise limitation (including fatigue and shortness of breath) may be caused by underlying problems with heart valves and/or heart function. An echocardiogram ("echo") is the single most useful test to identify these problems, but an expert sonographer is needed to acquire these images. This means that access to echo is often limited (because the number of skilled sonographers is limited), especially in rural and remote Australia.

Advances in computing ("artificial intelligence, AI") have enabled a computer to assist an untrained person collect the basic images required for an echo. This means that a limited echo can be acquired at the point of care, and interpreted remotely. The benefit of this approach is that the threshold for obtaining an echo is lower (eg. patients don't have to wait or travel). The results obtained so far with AI-echo suggests that the same types of images provide the same findings as a full echo. However, a full echo provides additional information. What we don't know is whether the benefits of better access to AI-echo justify the potential inefficiency of an inconclusive result (requiring a standard echo in any case).

Medications, drugs and devices have to be approved for use by the Australian Federal Government. The Caption Health integrated software on the Terason echo machine has not been approved for echocardiography in Australia. This means that the proposed "AI-echo first" strategy needs to be proven to provide potential benefit relative to usual care (selected use of standard echo).

This research has been initiated by the study doctor, Professor Tom Marwick and is based at the Baker Heart and Diabetes Institute. The study is coordinated by the Baker Heart and Diabetes Institute. This research has been funded by a grant from the Medical Research Future Fund.

3 What does participation in this research involve?

This research does not involve a significant time commitment.

Everyone involved in the study will have baseline data collection (about 20 minutes), involving
Completion of the Participant Information & Consent Form (PICF)
If you decide to participate in this study, you will be asked to sign the Consent Form at the end of this document, before we perform any assessments. We will explain the project to you in detail and you will have an opportunity to ask our experienced research staff any questions in relation to this study.
Clinical review and questionnaires
One of the investigators or study co-ordinators will ask you questions about your past medical history and ask you to complete some questionnaires (see table below for a list) about your current wellbeing, activity level, health status and need for medical resources.

You will be participating in a randomised controlled research project. Sometimes we do not know which investigation is best for assessing a condition. To find out we need to compare different approaches. We put people into groups and give each group a different test. The outcomes are compared to see if one is better. To try to make sure the groups are the same, each participant is put into a group by chance (random). People in this trial will be randomly allocated to conventional echo or AI echo. This research project has been designed to make sure the researchers interpret the results in a fair and appropriate way and avoids study doctors or participants jumping to conclusions.

If you are randomized to the usual care arm, your doctor may decide to send you for a full echo, in other words a test on a large echo machine acquired by an expert sonographer – in many rural areas, this involves travelling to another city or waiting until an expert comes to visit. If you are in the AI-echo arm, you will have an echo obtained by a non-expert, guided by the Artificial Intelligence software integrated with the machine. Depending on the results, you may not need to travel or undergo the usual test. In both cases, the images will be interpreted by an expert, who will make the diagnosis or arrange additional testing.

Timing of study **visits**

Study procedure	**Baseline**	**12months**	**36 months**
Informed consent	X		
Baseline assessment [a] - Medical history - Clinical examination	X		
Questionnaires • Resource use questionnaire • Assessment of quality of life (AqoL-4D) • Charleston comorbidity index • Heart failure questionnaire (ARIC) • Physical activity questionnaire (DASI)	X	X	
Medical records	X	X	X
Echocardiography	X		

[a] History of risk factors, heart failure, valvular heart disease

We wish to stay in touch with you (by phone or email) for at least 1 year after the completion of the study, and have permission to contact you again in the future and access your medical records for 3 years from the date you sign the consent form in order to obtain information relevant to the study.

4 What do I have to do?

This research will not interfere with any current treatment you may be receiving. If you have evidence of heart disease on this testing, we will provide you advice and access to medications and lifestyle change. Of course it's up to you as to whether you wish to adhere to this advice. There will be no other changes to your life – for example you can still donate blood.

5 Other relevant information about the research project

A total of 612 participants will be screened at the 3 Australian sites (Alice Springs Hospital, Western Health, Baker Heart and Diabetes Institute) and we expect that about 406 will be randomised in the study.

Financial considerations:
You will not receive payment for taking part in this study.
None of the study steps will incur any cost to you.

6 Do I have to take part in this research project?

Participation in any research project is voluntary. If you do not wish to take part, you do not have to. If you decide to take part and later change your mind, you are free to withdraw from the project at any stage.

If you do decide to take part, you will be given this Participant Information Sheet and Consent Form to sign and you will be given a copy to keep.

7 What are the alternatives to participation?

You do not have to take part in this research project to receive treatment with your doctor. The study doctor will discuss the options with you before you decide whether or not to take part in this research project. You can also discuss the options with your local doctor.

8 What are the possible benefits of taking part?

We cannot guarantee or promise that you will receive any benefits from this research; however, possible benefits may include more rapid and convenient exclusion of a cardiac problem because the scan can be provided locally and interpreted remotely.

9 What are the possible risks and disadvantages of taking part?

Ultrasound tests are safe, non-invasive and radiation-free. The process of obtaining a scan involves pressing a device (called a transducer) on the chest, which can cause some temporary discomfort.

There is a risk of missing significant findings on any echo test, and the results always need to be integrated with clinical evaluation.

If the investigations identify a problem that you were not previously aware of, this may cause some unease. The study team and your doctor will provide information about the meaning of new findings and how they are likely to be managed. As you have a clinical problem where an echo is being considered, dealing with new information is a potential issue whether you are in the study or not, but the timing of receiving this information may be different, depending on whether you are allocated to AI echo or standard echo.

10 What will happen to my imaging results?

Only authorised staff will have access to imaging results obtained in the course of the study. The images obtained for the purpose of this research project will be transferred to the Baker Institute. These images will be stored and labelled with your unique study number only, not your name or other identifiable information.

When you provide consent to take part in this study, you are consenting for the collection of your images for this research activity

11 What if new information arises during this research project?

Sometimes during the course of a research project, new information becomes available about the treatment that is being studied. If this happens, your study doctor will tell you about it and discuss with you whether you want to continue in the research project. If you decide to withdraw, your study doctor will make arrangements for your regular health care to continue. If you decide to continue in the research project you will be asked to sign an updated consent form.

Also, on receiving new information, your study doctor might consider it to be in your best interests to withdraw you from the research project. If this happens, he/ she will explain the reasons and arrange for your regular health care to continue.

12 Can I have other treatments during this research project?

Whilst you are participating in this research project, you will be able to take all of the medications or treatments you have been taking for your condition or for other reasons.

13 What if I withdraw from this research project?

If you decide to withdraw from the project, please notify a member of the research team before you withdraw. This notice will allow that person or the research supervisor to discuss any health risks or special requirements linked to withdrawing.

If you do withdraw your consent during the research project, the study doctor and relevant study staff will not collect additional personal information from you, although personal information already collected will be retained to ensure that the results of the research project can be measured properly and to comply with law. You should be aware that data collected by the sponsor up to the time you withdraw will form part of the research project results. If you do not want them to do this, you must tell them before you join the research project.

14 Could this research project be stopped unexpectedly?

This research project may be stopped unexpectedly for a variety of reasons. These may include reasons such as:

- The device being shown not to be effective
- The device being shown to work and not need further testing

15 What happens when the research project ends?

Results of the study will be provided through the website https://www.baker.edu.au/research/clinical-trials.

Part 2 How is the research project being conducted?

16 What will happen to information about me?

By signing this form you consent to the relevant research staff collecting and using your personal and health information about you for the research project. Any information obtained in connection with this research project that can identify you will remain confidential and securely stored. All information used for analyses will have identifying data removed (such as your name or address) and be labelled only with your study ID number. Your information will only be used for the purpose of this research project and it will only be disclosed with your permission, except as required by law.

By signing this form you consent to the relevant research staff collecting and using your personal and health information about you for the research project. Any information obtained in connection with this research project that can identify you will remain confidential and securely stored.

All information used for analyses will have identifying data removed (such as your name, address or hospital number) and be labelled only with your study ID number. This data is re-identifiable (coded), in other words, the investigators will have a list of study ID numbers and patient names in a secure location (locked cabinet and/or security-password limited computer file), in case re-identification of images is required.

Your information will only be used for the purpose of this research project. It will be disclosed only with your permission, or in compliance with the law. As this is a clinical trial, we plan to store the information for 15 years.

Information about you may be obtained from your health records held at this and other health services for the purpose of this research. By signing the consent form you agree to the study team accessing health records if they are relevant to your participation in this research project.

Your health records and any information obtained during the research project are subject to inspection (for the purpose of verifying the procedures and the data) by the relevant authorities and authorised representatives of the Sponsor, Baker Heart & Diabetes Institute, the institution

relevant to this Participant Information Sheet *[Name of institution]*, or as required by law. By signing the Consent Form, you authorise release of, or access to, this confidential information to the relevant study personnel and regulatory authorities as noted above.

We may need to share our study results with other researchers and upload our results in forums accessible to the public (like the internet) to ensure compliance with publishing or funding requirements. In these situations, and wherever possible, we would share a general summary of the data (e.g. the level of unrecognised heart problems identified by echo) and not individual-level data. When it is required to share individual-level data, the data will be submitted to a controlled access repository that meets international security and safety standards. The data will be coded and confidential, subject to a data-sharing agreement and limited to the minimum information required.

It is anticipated that the results of this research project will be published and/or presented in a variety of forums. In any publication and/or presentation, information will be provided in such a way that you cannot be identified, except with your permission. Results of the study will be provided through the website https://www.baker.edu.au/research/clinical-trials.

In accordance with relevant Australian and/or Victorian privacy and other relevant laws, you have the right to request access to your information collected and stored by the research team. You also have the right to request that any information with which you disagree be corrected. Please contact the study team member named at the end of this document if you would like to access your information.

17 Complaints and compensation

If you suffer any injuries or complications as a result of this research project, you should contact the study team as soon as possible and you will be assisted with arranging appropriate medical treatment. If you are eligible for Medicare, you can receive any medical treatment required to treat the injury or complication, free of charge, as a public patient in any Australian public hospital. We cannot imagine a

You have a right to take legal action to obtain compensation for any injuries or complications resulting from the study. Compensation may be available if your injury or complication is sufficiently serious and is caused by unsafe drugs or equipment, or by the negligence of one of the parties involved in the study (for example, the researcher, the hospital, or the treating doctor). You do not give up any legal rights to compensation by participating in this study.

18 Who is organising and funding the research?

This research project is being conducted by Baker Heart and Diabetes Institute.

The study is being supported by the Medical Research Future Fund, a research funding body that is not a commercial entity and has no financial interests in the study findings.

None of the investigators have any external interest or benefit from doing the study. All of the money being paid to run the trial is managed by the Baker Institute. No money is paid directly to individual researchers. You will not benefit financially from your involvement in this research project even if knowledge acquired from the study proves to be of commercial value.

19 Who has reviewed the research project?

All research in Australia involving humans is reviewed by an independent group of people called a Human Research Ethics Committee (HREC). The ethical aspects of this research project have been approved by the HREC of Alfred Health – the Alfred Hospital Ethics Committee.

This project will be carried out according to the *National Statement on Ethics Conduct in Human Research* (2007). This statement has been developed to protect the interests of people who agree to participate in human research studies.

20 Further information and who to contact

When you have read this information, the researcher will discuss it with you and any queries you may have. If you would like to know more at any stage, please do not hesitate to contact the study coordinator Joel Smith on (03) 8532 1550 or baker.AGILE@baker.edu.au.

The person you may need to contact will depend on the nature of your query.

If you would like any further information concerning this project you can contact any of the following people:

Name: Joel Smith
Position: Study coordinator
Telephone: 03 8532 1550
Email: joel.smith@baker.edu.au

If you have any medical problems which may be related to your involvement in the project (for example, any side effects), you can contact the principal study doctor on *[phone number]* or any of the following people:

Clinical contact person

Name	*[Name]*
Position	*[Position]*
Telephone	*[Phone number]*
Email	*[Email address]*

If you have any complaints about any aspect of the project, the way it is being conducted or any questions about being a research participant in general, then you may contact:

Reviewing HREC office/complaints contact person
Position: Complaints Officer, Office of Ethics & Research Governance, Alfred Health
Telephone: 03 9076 3619
Email: research@alfred.org.au
Please quote the following project number: 87233

Site complaints contact person:
For matters relating to research at the site at which you are participating, the details of the local site complaints person are;

Name	*[Name]*
Position	*[Position]*
Telephone	*[Phone number]*
Email	*[Email address]*

If you have any complaints about any aspect of the project, the way it is being conducted or any questions about being a research participant in general, then you may contact:

Reviewing HREC approving this research and HREC Executive Officer details

Reviewing HREC name	*[Name of HREC]*
HREC Executive Officer	*[Name]*
Telephone	*[HREC Executive Officer Phone number]*
Email	*[HREC Executive Officer Email address]*

Local HREC Office contact (Single Site -Research Governance Officer)

Name	*[Name]*
Position	*[Position]*
Telephone	*[Phone number]*
Email	*[Email address]*

Consent Form - *Adult providing own consent*

Title	Use of Artificial intelligence-Guided echocardiography to assIst cardiovascuLar patient managEment
Short Title	AGILE-echo study
Protocol Number	HREC/**87233**/
Project Sponsor	Baker Heart and Diabetes Institute
Coordinating Principal Investigator/ Principal Investigator	Professor Tom Marwick
Associate Investigator(s)	Dr Leah Wright, Dr Quan Huynh, Prof Kaz Negishi, Prof Graham Hillis, Dr Ben Costello, Prof Sudhir Wahi, Prof Paul Scuffham, Dr Angus Baumann, Dr Chris Yu
Location	Baker Heart and Diabetes Institute, Dubbo Base Hospital, Alice Springs Hospital, Princess Alexandra Hospital, Royal Perth Hospital

Declaration by Participant

I have read the Participant Information Sheet or someone has read it to me in a language that I understand.

I understand the purposes, procedures and risks of the research described in the project.

I give permission for my doctors, other health professionals, hospitals or laboratories outside this hospital to release information to *[Name of Institution]* concerning my disease and treatment for the purposes of this project. I understand that such information will remain confidential.

I have had an opportunity to ask questions and I am satisfied with the answers I have received.

I freely agree to participate in this research project as described and understand that I am free to withdraw at any time during the study without affecting my future health care.

I understand that I will be given a signed copy of this document to keep.

Name of Participant (please print) _____

Signature _____ Date _____

Declaration by Study Doctor/Senior Researcher†

I have given a verbal explanation of the research project, its procedures and risks and I believe that the participant has understood that explanation.

Name of Study Doctor/
Senior Researcher† (please print) _____

Signature _____ Date _____

† A senior member of the research team must provide the explanation of, and information concerning, the research project.

Note: All parties signing the consent section must date their own signature.

I understand that, if I decide to discontinue the study treatment, I may be asked to attend follow-up visits to allow collection of information regarding my health status. Alternatively, a member of the research team may request my permission to obtain access to my medical records for collection of follow-up information for the purposes of research and analysis.

Form for Withdrawal of Participation - *Adult providing own consent*

Title	Use of Artificial intelligence-Guided echocardiography to assIst cardiovascuLar patient managEment
Short Title	AGILE-echo study
Protocol Number	HREC/**87233**/
Project Sponsor	Baker Heart and Diabetes Institute
Coordinating Principal Investigator/ Principal Investigator	Professor Tom Marwick
Associate Investigator(s)	Dr Leah Wright, Dr Quan Huynh, Prof Kaz Negishi, Prof Graham Hillis, Dr Ben Costello, Prof Sudhir Wahi, Prof Paul Scuffham, Dr Angus Baumann, Dr Chris Yu
Location	Baker Heart and Diabetes Institute, Dubbo Base Hospital, Alice Springs Hospital, Princess Alexandra Hospital, Royal Perth Hospital

Declaration by Participant

I wish to withdraw from participation in the above research project and understand that such withdrawal will not affect my routine treatment, my relationship with those treating me or my relationship with *[Institution]*.

Name of Participant (please print) _____

Signature _____ Date _____

In the event that the participant's decision to withdraw is communicated verbally, the Study Doctor/Senior Researcher will need to provide a description of the circumstances below.

Declaration by Study Doctor/Senior Researcher†

I have given a verbal explanation of the implications of withdrawal from the research project and I believe that the participant has understood that explanation.

Name of Study Doctor/
Senior Researcher† (please print) _____

Signature _____ Date _____

† A senior member of the research team must provide the explanation of and information concerning withdrawal from the research project.

Note: All parties signing the consent section must date their own signature.