

Cardiovascular Health Mission National Consultation on the Roadmap and Implementation Plan

Webinar



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### Introduction

- Welcome
- No microphones will be active, only hosts are able to speak
- All questions can be sent via the interactive Q&A input
- One hour has been allocated at the end of the presentation to answer questions
- A copy of this presentation will be made available on the MRFF website



### MRFF Background

- Established in 2015, the \$20 billion Fund is a long-term sustainable source of research funding
- The MRFF aims to transform health and medical research and innovation to improve lives, build the economy and contribute to health system sustainability
- Complementary Government funding of health and medical research in Australia:
  - MRFF awards funding for national priority areas that address gaps in research with a focus on research translation and commercialisation to improve the health and wellbeing of Australians
  - NHMRC awards funding through a range of investigator-initiated schemes to build capacity and advance health and medical knowledge



### MRFF 10-year investment plan

- The Australian Government announced a \$5 billion, 10-year investment plan for the MRFF, as part of the 2019-20 budget.
- There are 20 initiatives under four themes, funded over 10 years to harness innovation, provide vital infrastructure, improve patient outcomes, and generate jobs and economic growth.

| 2 | Patients                | Funding innovative treatments, supporting clinical trials, and delivering more advanced health care and medical technology to improve the health of all Australians |  |
|---|-------------------------|---|--|
| Ċ | Researchers             | Supporting our researchers to make breakthrough discoveries, develop their skills and progress their careers in Australia   |  |
|   | Research<br>missions    | Helping researchers think big to tackle significant health challenges<br>through investment, leadership and collaboration   |  |
|   | Research<br>translation | Moving research ideas from the lab to the clinic, so that medical<br>discoveries become part of clinical practice for GPs, specialists and<br>hospitals             |  |



### **MRFF Missions**

- MRFF missions:
  - focus on an area of unmet need or a technology with transformational potential (priority led)
  - > are planned and coordinated 10 year programs of work (strategic, Roadmap, Implementation Plan)
  - bring together key researchers, health professionals, consumers, stakeholders, industry partners (outcome focused)
  - harness resources across the system (investment, leadership and collaboration)
  - use innovative research approaches (new grant models)



### Purpose of consultation

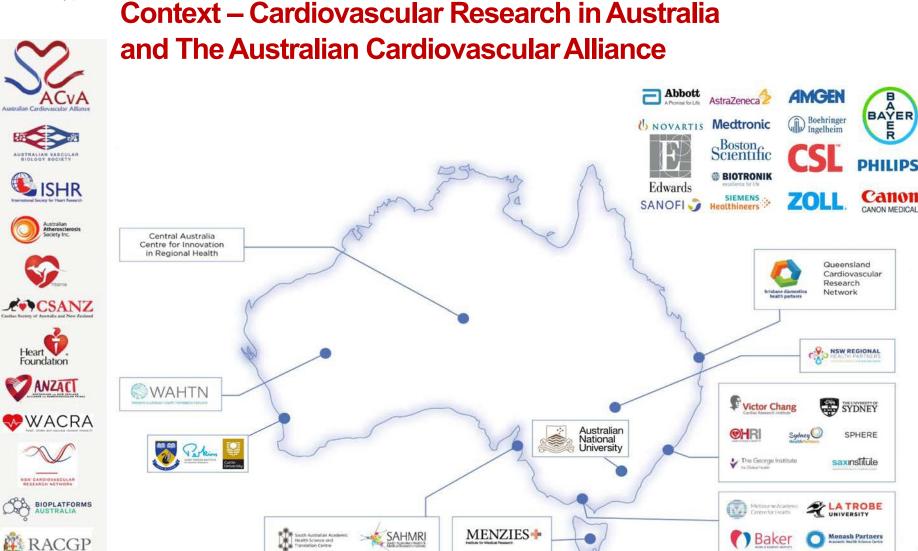
- Focus: Mission design (Roadmap and Implementation Plan)
- Questions:
  - As designed, will the Mission generate the knowledge required to improve health practice/policy and patient outcomes
  - Will the proposed grant opportunities elicit the research required to generate the knowledge needed to improve practice/policy and outcomes
  - > What else is required to maximise chance of success
  - In 10 years time, will we know if the Mission has succeeded (evaluation measures)



Australian Government

## Medical Research





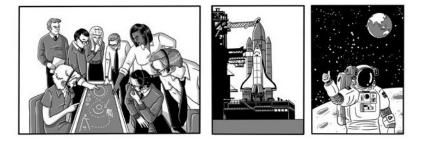


### Context-ACvA and the Australian CV and Stroke Research Sector





### Alignment of research to best serve national health



- One of the world's best health systems
- Significant funding with rigor, excellence and impact (NHMRC, MRFF, Department of Industry)
- Investing in:
  - Data platforms (identify gaps and impact)
  - Governance for national prioritization
  - Implementation pathways for evidenceand value-based care
- Leadership that drives collaboration across multiple jurisdiction- and engages the States
- It's about strategic *alignment* and *culture*



### **Mission for Cardiovascular Health**



#### Our goal

To make transformative improvements in cardiovascular health and stroke for all Australians:

- Reducing the number of Australians suffering from heart disease and stroke
- Improving outcomes from acute cardiovascular and stroke events
- Enhancing long-term recovery and survivorship after a cardiovascular or stroke event

#### **Our mission**

To accelerate Australian-led research to advance cardiovascular health through the creation of a world-class sustainable ecosystem underpinned by excellence, collaboration, innovation, consumer engagement and commercialisation, and embedded in the health care system



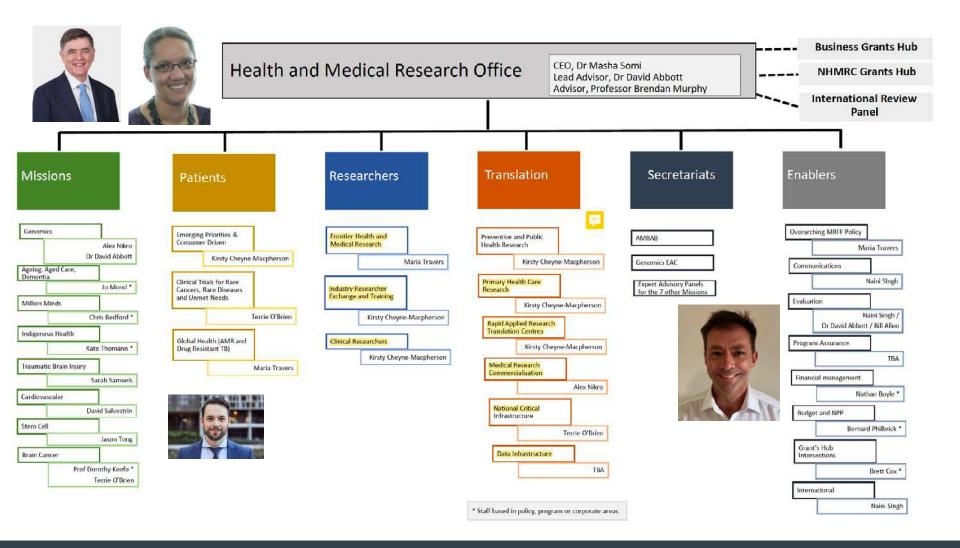
### **Cardiovascular Health Mission**

- Forms part of the MRFF 10 Year Investment Plan announced in 2019
- The Mission will make transformative improvements in cardiovascular health and stroke for all Australians
- \$220 million from 2019–20 to 2028–29
- Mission funding

| 2019–<br>20<br>\$m | 2020–<br>21<br>\$m | 2021–<br>22<br>\$m | 2022–<br>23<br>\$m | 2023–<br>24<br>\$m | 2024–<br>25<br>\$m | 2025–<br>26<br>\$m | 2026–<br>27<br>\$m | 2027–<br>28<br>\$m | 2028–<br>29<br>\$m | Total<br>\$m |
|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------|
| 23.0               | 24.0               | 24.0               | 24.0               | 25.0               | 20.0               | 20.0               | 20.0               | 20.0               | 20.0               | 220.0        |

Australian Government

# Medical Research Future Fund





### The Mission: Expert Advisory Panel

- Professor Gemma Figtree (Chair), University of Sydney
- Professor Garry Jennings AO, Chief Medical Advisor, National Heart Foundation
- Professor Emily Banks, Australian National University
- Dr Ray Mahoney, CSIRO
- Mr Chris Nave, Managing Director, Brandon Capital Partners
- Ms Jennifer Tucker, Consumer Advocate, National Heart Foundation
- Professor David Winlaw, Children's Hospital Westmead
- Professor Livia Hool, University of Western Australia
- Professor Dominique Cadilhac, Monash University
- Dr James Hudson, QIMR Berghofer
- Professor Julie Bernhardt, Florey Institute of Neuroscience and Mental Health





### Expert Advisory Panel

- Role to advise the Minister on the strategic priorities for research investment through the MRFF Missions by defining:
  - Evidence and knowledge gaps to assist in transforming health care and health outcomes for individuals and communities
  - Key research questions that if answered will deliver meaningful change to patients through the translation of research

### The Cardiovascular Health Mission Expert Advisory Panel

Comprises 10 members based on their relevant expertise across a broad spectrum of cardiovascular disease and stroke, including consumer experience and commercialisation



## **Roadmap – Goal and Mission**

### Our goal

To make transformative improvements in cardiovascular health and stroke for all Australians through:

- Reducing the number of Australians of all ages affected by heart disease and stroke
- Improving outcomes from acute cardiovascular and stroke events
- Improving long-term recovery and survivorship after a cardiovascular or stroke event

### **Our mission**

To accelerate Australian-led research to advance cardiovascular health through the creation of a world-class sustainable eco-system underpinned by excellence, collaboration, innovation, consumer engagement and commercialisation, and embedded in the health care system





### <u> Roadmap – Scope</u>

- The Mission will improve health and save lives by mobilising research efforts, and developing collaborative and translational platforms.
- It will encompass broad innovations in cardiovascular health and stroke to benefit all Australians, with particular efforts to improve equity and outcomes for Aboriginal and Torres Strait Islander people.

# Medical Research Future Fund





### Roadmap:

### **Funding principles**

Activities funded under this mission should:

- support excellence, including through competitive and transparent peer-review processes
- support people, programs, platforms and urgent capacity-building initiatives
- · enhance collaboration and translation across the research system
- facilitate the best cross-disciplinary teams to tackle identified inequalities in health care access, provision and outcomes, with particular consideration of sex and ethnicity
- develop innovative and cost-effective approaches to primary and secondary prevention, early detection, treatment and long-term care, including reducing duplication and waste in research
- promote deep engagement with health services, government and nongovernment organisations, industry, patients and caregivers
- support leverage from other funding sources, including philanthropic, industry and international contributions
- support a vibrant and enduring research ecosystem





### Roadmap:

### **Priority areas for investment**

Funding for heart, vascular and stroke research will be invested across strategic interrelated and complementary flagships:

- drug discovery targeted development of new therapies, incorporating emerging biology
- bio-medical engineering development, implementation and translation of biomedical engineering approaches for cardiovascular health to improve diagnosis, precision treatment and outcomes, using biodevices and 3D tissue-engineered products, and using bioengineering models to maximise data use and prediction.
- precision medicine embedding multi-omic platforms and computational bioinformatics within well-characterised clinical cohorts to discover new markers for early disease detection and personalised risk prediction, and identify mechanisms to provide evidence-based targeted and tailored treatment

- big data use and optimisation of large-scale data to support efficient, innovative research, improving the health system and health outcomes
- clinical trials rigorous testing of innovative interventions in primary care, acute care, rehabilitation and community settings
- implementation and policy research focused on implementing effective and efficient prevention and care, including supporting evidence-inform and policy decision making



### **Early Investments**

Grant Opportunities in 2019-20:

- \$18m was awarded to six research projects aimed to reduce the impact of congenital heart disease.
- \$11.3m was awarded to six research projects into three key priorities:
  - Improving prevention of heart disease and stroke;
  - Improved survival outcomes after an acute heart or stroke event through a focus on treatment; and
  - Improving secondary prevention and survivorship after a cardiovascular event.
- \$4m was awarded to the Stroke Foundation for research into better diagnosis and treatment of children who suffer stroke
- \$4m was awarded to the National Heart Foundation (matched funding) for research into cardio-oncology; predictive risk modelling; secondary prevention; and women and heart disease.

Australian Government

## Medical Research Future Fund

### Much needed Grants for National Collaborative Efforts for prioritised problems.....BUT

CV ~\$88 Mill pa

Australian Government National Health and Medical Research Council

Vegetable types and their bioactives: growing the evidence for cardiovascular benefits Early interventions to improve the quality of survival after critical illness Bioactive coatings to improve function and lifetime of implantable medical devices Molecular basis of apoptotic cell disassembly and the function of this process in infection an Reducing the consequences of prematurity by improving the transition at birth. Designing tailored approaches to improve dietary patterns in young adults Interventions to eliminate rheumatic heart disease The Epidemiology of Diabetes Complications: Identifying New Risk Factors and Population Tr Novel vaccine technology to translate knowledge of immuno-pathogenesis into vaccines and Developing innovative targeting strategies for diagnosis and treatment of cardiovascular and Compiling reliable evidence for sex differences in cardiovascular disease A connectomic approach to understanding cerebrovascular disease in the elderly Developing and implementing evidence-based treatments to improve outcome following br Optimizing the effectiveness and delivery of stroke reperfusion therapies Using early detection tests to benefit health without causing harm Cardiac MRI in the evaluation of cardiovascular disease - enhancing mechanistic understand Improving outcomes after cardiac arrest: strengthening the chain of survival. A multi-pronged approach for the development of effective and safe anticoagulants Eating in context: Understanding the pathways through which everyday contextual factors in Control of translation in cancer, cell stress response and ageing Determinants and cardiometabolic consequences of early life inflammation The genetic control of complex diseases at a cellular level Driving quality improvement through Meaningful Evaluation of Aphasia SeRvicES (MEASuRES Improved cardiovascular outcomes for growth-restricted infants Generating new evidence and improving health systems to improve the management of strok New prothrombotic pathways linked to mechanotransduction New treatments for obesity, diabetes and cardiovascular disease The long-term effects of child, adolescent, and young adult cholesterol levels on future cardi Generation of high quality, clinically relevant knowledge to inform global nutrition practice Targeting the Vascular Microenvironment in Human Disease Investigating the function of chromatin modifiers in embryonic development and disease Catheter ablation for atrial fibrillation in patients with heart failure and myocardial fibrosis Imaging Profiling Platform for Thrombotic Disease and Anti-Platelet Therapeutics - new trans Improving stroke care in regional and rural Australia

Need Sustainable Platforms for accelerating impact:

- Clinical Trials
- Big Data

٠

- Health Economics
- Implementation
- Industry interface
- Strategic governance of whole sector

| Institution                                  | Funding<br>Amount | Project Title   |  |  |  |  |  |
|--|-------------------|---|--|--|--|--|--|
| University of<br>Sydney                      | \$2,997,908       | Colchicine After Stroke to Prevent Event Recurrence<br>(CASPER) Study   |  |  |  |  |  |
| University of New<br>South Wales \$1,467,091 |                   | Novel deep learning methods for large-scale cardiovascular<br>risk screening using Australian digital health data   |  |  |  |  |  |
| University of \$2,138,22<br>Melbourne        |                   | A randomised controlled trial of ultra-early, minimally<br>invasive surgery for intracerebral haemorrhage<br>(EVACUATE)   |  |  |  |  |  |
| Monash University                            | \$1,416,095       | Using Polygenic Risk Scores to Target Statin Therapy in<br>Primary Prevention   |  |  |  |  |  |
| University of New<br>South Wales \$1,629,905 |                   | Total Cardiac Care - STROKE: A randomised controlled tri<br>of a comprehensive smartphone application-centric model of<br>care to improve outcomes in stroke patients |  |  |  |  |  |
| University of New<br>South Wales \$1,687,990 |                   | The SaltSwitch Online Grocery Shopping (OGS) Trial: A<br>Novel Method for Reducing Blood Pressure among<br>Individuals with Hypertension                              |  |  |  |  |  |
| University of<br>Sydney \$3,994,175          |                   | An Australian Study of the Outcomes and Burden of<br>Congenital Heart Disease   |  |  |  |  |  |
| University of<br>Sydney                      | \$3,328,569       | Congenital Heart Fitness Intervention Trial: CH-FIT   |  |  |  |  |  |
| University of<br>Sydney                      | \$2,081,761       | Personalised Pulmonary Valved Conduits: reducing re-<br>operations in CHD   |  |  |  |  |  |
| The University of<br>Adelaide                | \$3,041,595       | Maternal exposures, congenital heart defects, and child<br>development  |  |  |  |  |  |
| The University of<br>Queensland              | \$3,133,858       | Gene Expression to Predict Long-Term Outcome in Infants<br>After Heart Surgery  |  |  |  |  |  |
| Queensland<br>University of<br>Technology    | \$2,997,256       | CHD LIFE+ family-centred care models supporting long-term neurodevelopment  |  |  |  |  |  |

MRFF

NHMRC



MRFF Mission for Cardiovascular Health- ~\$20 Mill pa



### **MRFF Strategy**

#### Vision

A health system fully informed by quality health and medical research.

#### Aim

Through strategic investment, to transform health and medical research and innovation to improve lives, build the economy and contribute to health system sustainability.

#### Objectives

- Create health and economic benefits
   from research discoveries and
   innovations
- Embed research evidence in healthcare policy and in practice improvement
- Drive collaboration and innovation across the research pipeline and healthcare system
- Strengthen transdisciplinary research collaboration
- Provide better access to research infrastructure
- Maximise opportunities for research translation by engaging with consumers

- Position the research sector and health
   system to tackle future challenges
- Facilitate the commercialisation of great Australian research
- Demonstrate the value and impact of research investment

#### Strategic platforms

- Strategic and international horizons
- Data and infrastructure
- · Health services and systems
- · Capacity and collaboration
- Trials and translation
- Commercialisation

#### Impact measurement

- · Better patient outcomes
- Beneficial change to health practices
- Evidence of increased efficiency in the health system
- Commercialisation of health research outcomes
- Community support for the use of and outcomes from funding

#### AUSTRALIAN MEDICAL RESEARCH AND INNOVATION STRATEGY 2016-2021





# Medical Research

### Future Fun c

### **Mission Implementation Plan**

- Mission Enablers
- For each Mission Goal and Priority Area, the Implementation Plan identifies non-research activities
  required to facilitate and support the MRFF funded research, contributing to the goals and facilitating
  long term implementation.
- The following enablers will provide overarching support for implementation of the Mission.
- A nationally coordinated approach leveraging core research capabilities to support all funded projects.
- Effective and extensive engagement across all levels of government will be established to ensure the outcomes of the Mission are transformative to health care.
- The Mission enabling capabilities can also deliver:
- workforce development in areas such as large-scale bioinformatics, data analysis
- · continuous quality improvement.
- improved integration with health system priorities including health care quality standards, patient outcomes, economic and financial factors/obligations.
- Industry engagement

Challenge re resources and leadership Need to leverage state and other jurisdictions





### Leverage other investment and opportunities

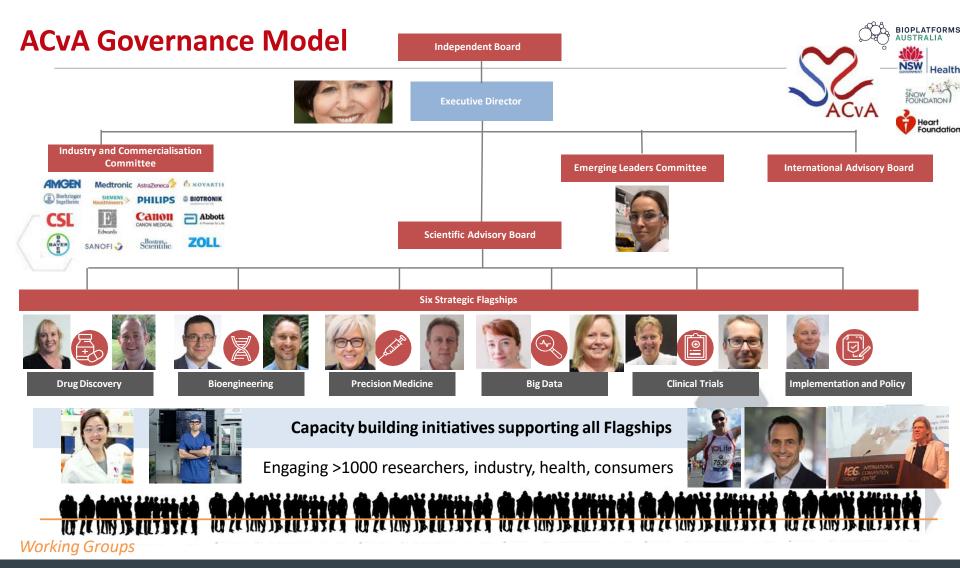






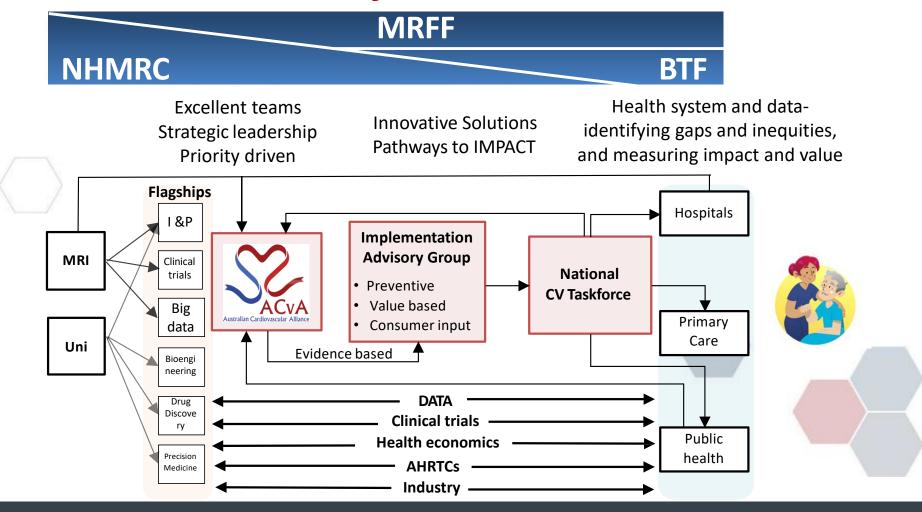
State and territories Industry Researchers Consumers etc etc







# Medical Research Working with researchers and health to build a vibrant sustainable ecosystem





### Implementation Plan

- Implementation strategy to guide research investment over the life of the Mission
- Priority areas for investment allocated across the short, medium and long term time-frames
- Establishes how the outcomes from each priority will be evaluated in terms of benefit to Australian patients and facilitate tracking of the mission's progress towards its objectives
- Identifies supporting activities, and collaborative opportunities





Medical Research Future Fund

Implementation plan

September 2020

Cardiovascular Health Mission

## **Implementation Plan – Priority Areas**

The following priority areas have been identified to achieve the objectives of the Mission:

| Aim  | Priority areas for investment   |
|--|---|
| 1. Reduce the number<br>of Australians of all ages   | <b>1.1</b> Improving understanding of cardiovascular disease risk, including biological mechanisms  |
| affected by heart disease<br>and stroke  | <b>1.2</b> Identifying best-practice preventive care for all Australians  |
| 2. Improve outcomes from acute cardiovascular and  | <b>2.1</b> Optimising evidence-based diagnoses and clinical pathways  |
| stroke events  | <b>2.2</b> Discovering new solutions through innovation – technology, drugs and devices, and models of care   |
| 3. Improve long-term<br>recovery and survivorship<br>after a cardiovascular or<br>stroke event | <b>3.1</b> Identifying and targeting personalised secondary prevention programs, to prevent further stroke and heart events                               |
| Stone event  | <b>3.2</b> Developing new treatments for recovery with better understanding of the biology of recovery, leading to improved monitoring and new treatments |
|  | 3.3 Improving survivorship and reducing morbidity   |



### **Implementation Plan (2)**

- Based on the priority areas and their goals, EAP worked to:
  - Identify the investment activities required to achieve these goals
  - Identify additional activities outside of the Mission that will be required to achieve success
  - Identify opportunities to leverage additional investment
  - Define what success will look like, how this might be measured and across what timeframe





### Implementation Plan e.g. Priority Area 1.1.



#### Priority area 1.1

Improving understanding of cardiovascular disease risk, including biological mechanisms

medium term 2–5 years to long term 6–10 years

Research projects will:

- identify and evaluate novel diagnostic markers and methods to better predict risk of cardiovascular disease and stroke
- develop and evaluate clinical pathways for implementing optimised evidence-based diagnosis and treatment
- support integration of individual and population approaches to optimise cardiovascular disease and stroke prevention

Research to begin in the ... Priorities for investment (research questions and objectives) Four research projects commenced in June 2020: short term 1-2 years Novel deep learning methods for large-scale cardiovascular risk screening using Australian digital health data (University of NSW, \$1.4 million) Using Polygenic Risk Scores to Target Statin Therapy in Primary Prevention (Monash University, \$1.4 million) Address gaps in cardiovascular risk assessment (Heart Foundation, \$2 million, co-funded) · Identify non-genomic factors associated with congenital heart disease (University of Adelaide, \$3 million) Future research projects will: · develop novel blood, imaging and clinical markers and methods for improved risk prediction and early detection of cardiovascular disease and stroke identify and quantify system and individual mechanisms that contribute to variation and inequities in cardiovascular disease and stroke care, and risk · use implementation- and systems-based research (built on principles of co-design methodology) to better understand and predict cardiovascular disease and stroke risk in Aboriginal and/or Torres Strait Islander people



### Opportunities for leverage and activities required to support



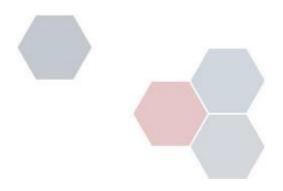
### Opportunities to use additional investment and other research to support the priority areas

- · Partnerships may include:
  - existing large-scale national and state data linkage systems (eg National Integrated Health Services Information, Multi-Agency Data Integration Project), and primary care data linkage systems to develop large-scale cardiovascular data platform integrating clinical, state, national and other data sources
  - commercial clinical software providers to develop partnerships that support creating data aggregation platforms that the research sector can access
- private health insurers for example, with the shared goal of valuebased care and prevention
- the National Critical Research Infrastructure Strategy
- the Australian Health Research Alliance and the Australian Clinical Trials Alliance
- the Heart Foundation and the Stroke Foundation to enable consumer engagement and advocacy relating to data security and big-data value
- Use existing clinical registries and cohorts with biobanks to create national online open access resource. For example, there are data from 47,000 patients in individual cohorts from the Australian Cardiovascular Alliance Precision Medicine Flagship, and the Australian STROKE registry has data from more than 100,000 stroke patients



#### Activities required to support the research and facilitate longterm implementation

- Create large-scale platforms, and integrate data linkage, national biobanks, imaging and online bioresources
- Broad engagement of research, health and industry experts towards goals, to progress grants and present platforms
- Clinical trials network contributing to large-scale national cohort studies (work with the Australian Health Research Alliance and the Australian Clinical Trials Alliance)
- Advocate to consumers regarding data security, and benefits of large-scale data research
- Undertake economic evaluations and impact assessments of new pathways and innovations in prevention





### Cardiovascular Health Mission – Current Grant Opportunity

### 2020 Cardiovascular Health Grant Opportunity (Closes 3 March 2021)

Up to \$20.28 million of funding is available in 2020-21 for three Streams:

- Stream 1: develop novel interventions, including therapeutics and devices, to prevent cardiovascular disease and stroke, including novel interventions that target individuals who experience rapid progression of disease despite best-practice care.
- Stream 2: develop novel treatments and devices to improve outcomes (e.g. reduce complications, length of stay) following acute cardiovascular and stroke events.
- Stream 3: conduct small-scale development projects to establish feasible, evidence based approaches aimed at improving survivorship and reducing morbidity.

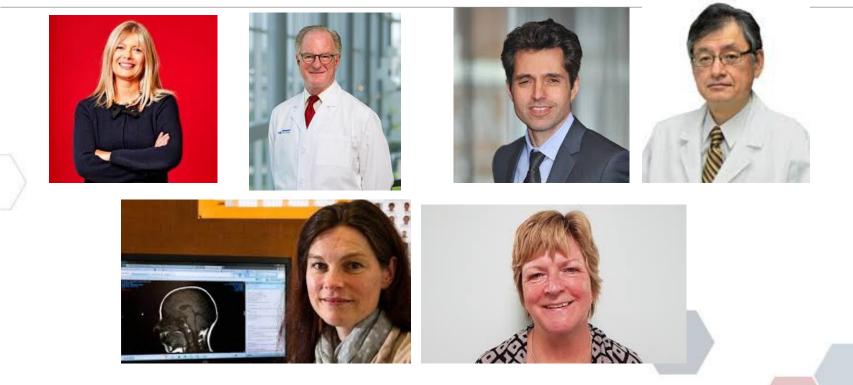


### Cardiovascular Health Mission Roadmap and Implementation Plan Consultation

- The Cardiovascular Health Mission Roadmap and Implementation Plan underwent international review in late 2020
- The international review panel comprised experts who provided advice in the context of relevant activities occurring internationally, which can inform the strategic direction of the Mission's Roadmap and Implementation Plan
- The Minister for Health is interested in your comments on the Cardiovascular Health Mission Roadmap and Implementation Plan, which will guide future MRFF investments



### **International Review Panel and Report**



- Minor changes to the Implementation Plan
- Extensive discussion around leveraging broad research sector and intersecting with health/jurisdictions
- No changes were recommended for, or made to, the Roadmap



### **Consultation – open discussion**

- One hour allocated
- Please type questions in the Q&A box provided on the screen
- Questions and feedback will be collated for the presenters to note or discuss
- All submissions can be made through the Consultation Hub on the Department of Health website (<u>www.consultations.health.gov.au</u>)
- Reminder online submissions close 23<sup>rd</sup> April 2021



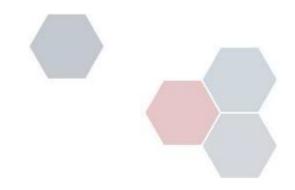
### **Consultation questions**

- Are the priority areas for investment identified in the implementation plan the most effective way for delivering on the Mission's goal and aims?
- Are there existing research activities which could be utilised to contribute to the Cardiovascular Health Mission Roadmap and/or Implementation Plan aims and priority areas for investment? How can these be leveraged?
- What are the opportunities related to the Mission to better align excellent teams of researchers and health challenges
- How can we move towards a more sustainable and impactful system
- What enabling platforms exist/are required to achieve the Mission goals
- Are the 'Evaluation approach and measures' appropriate for assessing and monitoring progress towards the mission's goal and aims?
- Other?



## How to make it happen: beyond the Mission \$20 Mill pa

- Well articulated goals relevant to all CV researchers
- serving health
- strategic whole-of-pipeline vision and leadership
- connectivity and collaboration
- linkage with established and externally funded research
- industry partnerships
- NCRIS
- ACTA
- AHRA
- measuring impact
- international





Thank you

More information:

www.health.gov.au/MRFF www.consultations.health.gov.au

Interested in accessing MRFF grants:

Register with **GRANTCONNECT** (www.grants.gov.au)