



*Better treatments  
Better care  
Healthier societies*

**Pre-Budget Submission 2021–22**

# Building Back Better: Investing in Five Medical Research Ideas



## Foreword

Over the past year, Australians have been deeply impacted by COVID-19. In response, the Australian Government has delivered stable and decisive leadership, world-leading infection control, economy saving JobKeeper and JobSeeker programs and now a national vaccine program.

The Government has much to be pleased with but the impacts have been large and the 2021-22 Budget will be about economic recovery and ‘building back better’. ‘Building back better’ was first coined by the United Nations in 2015 for risk reduction following disaster and is being applied to the post-COVID-19 recovery plans. The [Organisation for Economic Co-operation and Development \(OECD\)](#) encourages COVID-19 responses that “trigger investment and behavioural changes” and economic interventions that that will “reduce the likelihood of future shocks and increase society’s resilience to them when they do occur.”

To this end The George Institute for Global Health has identified “building back better” opportunities in health and medical research. Investment in healthier societies produces broad societal gains but very clear economic returns – health research investment [stimulates the economy](#), with every \$1 invested in medical research returns \$3.90 to the budget.

The George Institute’s submission, ‘Building Back Better: Investing in Five Medical Research Ideas’ recommends the Australian Government’s Budget 2021-22 supports and prioritises:

- *Join Us: a national research register to increase our global competitiveness;*
- *Sepsis: reducing preventable death and disability;*
- *Gender equity: reducing sex and gender biases in research*
- *Aboriginal and Torres Strait Islander health; and*
- *The Health Innovation Hub: to turn ideas into products.*

These five ideas align with [The George Institute’s mission](#) to improve the health of millions of people worldwide. We do this by investigating the biggest burden of death and disability – chronic disease and injury.

The George Institute is a leading independent global medical research institute established 21 years ago and headquartered in Sydney, Australia. We have an international network of over 730 staff with major centres in China, India and the United Kingdom. We are affiliated with the University of New South Wales (UNSW) Sydney and Peking University Health Science Center, and are in collaboration with Imperial College London.

Our Australia program includes a special focus on Australia’s First Nations peoples. The health and medical research sector is a key catalyst for the post-pandemic recovery, enabling us to build back better by improving the health and wellbeing of individuals, strengthening the economy and boosting overall productivity.

### Acknowledgement of Country



The George Institute for Global Health acknowledges the Gadigal People of the Eora Nation as the Traditional Custodians of the land on which our Australian office is built and this submission is written. We pay our respect to Elders past, present and emerging.

## Key Budget Recommendations

### **Join Us: a national research register to increase our global competitiveness**

- Commit \$2 million to help register one million Australians to the *Join Us* national research register by 30 June 2022. The register will directly support Australian researchers and ensure clinical trials and cohort studies remain in Australia.

### **Sepsis: reducing preventable death and disability**

- Invest \$5 million to fund the Australian Sepsis Network to fully implement the Stopping Sepsis National Action Plan by delivering the outstanding recommendations.
- Establish a national institute / centre for infection control, sepsis and anti-microbial resistance, founded on consumer, professional and state and territory partnerships, with a key priority being to translate evidence into policy and practice.
- Implement a national sepsis education program for health care workers, comprising of a sepsis curriculum for undergraduate health programs and online training modules.
- Deliver a comprehensive sepsis awareness campaign for the public and health care workers, building on earlier work, to improve early recognition and prevention.

### **Gender equity: reducing sex and gender biases in research**

- Commission The George Institute to evaluate Australian Research Council (ARC), National Health and Medical Research Council (NHMRC) and Medical Research Future Fund (MRFF) policies and practices for inclusion of sex- and gender-disaggregated data collection, analysis and reporting in the research they fund.
- Commission The George Institute to develop recommendations about how to better understand and address sex and gender differences in risk factors, incidence, recognition, response to treatment and recovery across a broad range of diseases; including the efficacy, effectiveness and safety of all COVID-19 treatment and prevention interventions implemented in Australia.

### **Aboriginal and Torres Strait Islander health**

- Commit \$6 million into the National Health and Medical Research Council (NHMRC) Targeted Funding Round for health research that addresses systemic impacts of racism on the health and wellbeing of Aboriginal and Torres Strait Islander peoples and communities.
- Commit \$2 million to support The George Institute to develop a 'readiness to change' assessment with Local Health Networks and implement site-based organisation interventions to address systemic racism, including leadership development, structured interdisciplinary discharge planning, Aboriginal patient journey mapping, communities of practice and implementation of trauma-informed care. This is in line with the National Safety and Quality Health Standards.

### **The Health Innovation Hub: to turn ideas into products**

- Commit \$1.5 million to create the Health Innovation Hub to help fast track the development of affordable health solutions for non-communicable diseases, build entrepreneurial capacity and create a pipeline of new Australian MedTech companies.



# Join Us: a national research register to increase our global competitiveness

## Challenge

Currently in Australia, it is difficult to quickly identify and efficiently recruit patients and community members to clinical trials and cohort studies. According to the 2020 Australian Commission on Safety and Quality in Health Care report, "[The National Clinical Trials Governance Framework Literature review](#)", there is a perceived decline in new clinical trials due to "competing ongoing trials, limited avenues for clinicians to refer patients to a clinical trial and poor volunteer rates", and "Australia is less competitive than emerging markets on metrics of cost, timeliness of trial start-up, and the capacity to recruit the number of agreed trial participants."

The 2016 Australian Department of Health-commissioned report, "[Scoping and analysis of recruitment and retention in Australian clinical trials](#)", noted the following on recruitment and retention in clinical trials in Australia:

- 90% of industry-sponsored clinical trials failed to meet recruitment targets;
- 80% of industry-sponsored clinical trials did not meet their participant recruitment deadline; and,
- There was a 23% decline in the number of newly initiated pharmaceutical industry-sponsored clinical trials.

Due to these challenges, researchers are increasingly planning recruitment and international trials outside of Australia.

## Current Status

In 2020, The George Institute with UNSW Sydney established [Join Us](#), a national health research recruitment register. It is an outcome-focused tool that seeks to enhance community access to research, and increase the speed and completion of recruitment to health research projects. [Join Us](#) is capable of supporting research across the health and disease spectrum and of reaching populations not well represented in Australian research studies: rural and remote, culturally and linguistically diverse and Aboriginal and Torres Strait Islander communities. To date, we have committed \$400,000 to the project and created the [Join Us website](#) with online consent and registration, a secure participant database and a data linkage platform.

[Join Us](#) uses a similar approach to the successful [Scottish SHARE program](#), where patients and members of the community consent online to be contacted about research projects relevant to them, and to have their routinely collected health data stored securely for approved research projects. To date, SHARE has registered over 280,000 people, contacted over 50,000 people and facilitated over 90 research studies.

The concept of [Join Us](#) aligns with the recommendations of a 2011 Australian Government report, "[Clinically competitive: Boosting the business of clinical trials in Australia](#)", that indicated that there should be "capacity for potential participants and health practitioners to register their interest in future clinical trials, where those that have registered would be notified of new activity in their nominated therapeutic area(s)" as a way to increase participant recruitment in clinical trials.

Currently, The George Institute is in discussions with over 75 organisations about becoming official [Join Us](#) collaborators. This will assist with governance and recruitment. They include organisations such as peak bodies, medical research institutes, universities and not-for-profit health organisations.

## The 2021–22 Budget should...

Commit \$2 million to help register one million Australians to the [Join Us](#) national research register by 30 June 2022. The register will directly support Australian researchers and ensure clinical trials and cohort studies remain in Australia.

# Sepsis: reducing preventable death and disability

## Challenge

Sepsis is the leading cause of death from infection around the world. It is a preventable, life-threatening condition that arises when the body's response to an infection damages its own tissues and organs. Sepsis crosses all clinical disciplines and affects all ages, in both the general community and in high-risk groups.

Patients critically ill with COVID-19 are suffering from viral sepsis.

In Australia every year, it is estimated that close to 55,000 people suffer sepsis, 18,000 cases are treated in intensive care units (ICUs) and sepsis causes 8,000 deaths; more than road trauma and common cancers such as prostate and breast cancer. Sepsis causes or contributes to one in every five deaths globally. A substantial proportion of those who survive will suffer long-term physical, psychological and cognitive disabilities and the burden for survivors, their families and the health system is significant. Sepsis costs an estimated \$846 million every year to treat in Australian ICUs, and when longer-term care is included, the total cost is in excess of \$1.5 billion.

## Current Status

In 2014, The George Institute established the Australian Sepsis Network, a collaborative of consumers and state, territory and national organisations with a mission to reduce the burden of sepsis in Australia. In 2017, The World Health Organization classified sepsis as a global health threat and the World Health Assembly adopted a resolution, co-sponsored by Australia, calling for member states to implement national action plans to reduce deaths and disability from sepsis.

In response to the resolution, in 2017 the Australian Sepsis Network published [Stopping Sepsis National Action Plan](#) (the Plan) with 14 recommendations to achieve four key strategic goals:

1. Establish a nationally coordinated sepsis body to facilitate the Plan;
2. Invest in prevention and awareness campaigns to spur action within the community;
3. Implement a nationally recognised clinical care standard for sepsis; and
4. Invest in community and peer support services for sepsis survivors and their families.

Initially, the Plan had no funding and was supported by The George Institute's internal resources. In 2019, the Australian Government announced a \$1.5 million investment to reduce the burden of sepsis in Australia. This enabled the Australian Sepsis Network in collaboration with Australian Commission on Safety and Quality in Health Care to progress several key deliverables, including: a limited sepsis awareness campaign; a national clinical care standard; improved surveillance; and scoping of appropriate coordinated, post-sepsis care models. These actions constitute only partial implementation of the Plan.

## The 2021–22 Budget should...

Invest \$5 million to fund the Australian Sepsis Network to fully implement the Stopping Sepsis National Action Plan by delivering the outstanding recommendations.

- Establish a national institute / centre for infection control, sepsis and anti-microbial resistance, founded on consumer, professional and state and territory partnerships, with a key priority being to translate evidence into policy and practice.
- Implement a national sepsis education program for health care workers, comprising of a sepsis curriculum for undergraduate health programs and online training modules.
- Deliver a comprehensive sepsis awareness campaign for the public and health care workers, building on earlier work, to improve early recognition and prevention.



# Gender equity: reducing sex and gender biases in research

## Challenge

Sex and gender differences in risk factors, incidence, recognition, response to treatment and recovery are being uncovered for many major diseases. This includes new conditions such as COVID-19 as well as Australia's biggest killers, such as cardiovascular disease. Globally, policies are being put into place to better incorporate sex and gender into all medical research. For example, the European Commission now requires grant applicants to incorporate sex and gender analysis into the design of research studies.

Research led by The George Institute with partners demonstrated that Australia is lagging behind in terms of policies and practices for incorporating sex and gender in the design, collection and analysis of medical research. Accounting for sex and gender in medical research makes for better science, improves safety and quality of care, and reduces healthcare costs and unnecessary or ineffective tests and treatments.

## Current Status

In 2018, The George Institute established a Global Women's Health Program. The overarching principle is to promote a life-course approach to addressing the burden of non-communicable diseases and injury, as well as focussing on other important, women-specific health issues. We have a bold vision, consistent with the UN Sustainable Development Goals and National Women's Health Strategy, to improve the health of women in Australia and worldwide, as well as achieve gender equality and empower all women, by 2030.

A critical component of this vision is addressing the data bias and blindness that exists within the medical research sector, and the subsequent health interventions that are implemented based on these data (or lack thereof).

In 2020, The George Institute for Global Health partnered with the Australian Human Rights Institute at UNSW Sydney to launch a program of work to remove sex- and gender-based bias and blindness in Australian medical research and innovation. This is a substantial collaborative project with a national Expert Advisory Committee. It aims to work with all key groups within the medical research sector – including research funders, publishers, universities, research institutes, industry and peak bodies – to transform the way research is conducted, taught, published, assessed and translated.

## The 2021–22 Budget should...

Commission The George Institute to evaluate Australian Research Council (ARC), National Health and Medical Research Council (NHMRC) and Medical Research Future Fund (MRFF) policies and practices for inclusion of sex- and gender-disaggregated data collection, analysis and reporting in the research they fund.

Commission The George Institute to develop recommendations about how to better understand and address sex and gender differences in risk factors, incidence, recognition, response to treatment and recovery across a broad range of diseases; including the efficacy, effectiveness and safety of all COVID-19 treatment and prevention interventions implemented in Australia.

# Aboriginal and Torres Strait Islander health

## Challenge

Aboriginal and Torres Strait Islander people have an enduring humanity as evidenced through living and thriving for over 60,000 years. Colonisation of Australia has had a drastic and ongoing impact on the oldest, continuous living culture in the world.

2020 was a year in which COVID-19 placed a spotlight on the capabilities of global health systems, and a social movement – Black Lives Matter – placed a spotlight on the racism of institutions and society. In Australia, there remains a gap in solutions that seek to better understand and redress the systemic issues that continue to impact upon the significant health and social inequities faced by Aboriginal and Torres Strait Islander peoples.

Despite policy and research attempts to identify solutions to improve experiences of and access to safe, quality hospital care, Aboriginal and Torres Strait Islander people continue to encounter inequities in access to equivalent standards of hospital service in Australia.

## Current Status

The George Institute is committed to developing and implementing a program of research and engagement conducted by Aboriginal and Torres Strait Islander peoples, and within Aboriginal and Torres Strait Islander ways of knowing, being and doing. The program aims to maintain an Aboriginal and Torres Strait Islander paradigm of health and healing (physical, emotional, social, cultural and spiritual) and have genuine community engagement and governance of projects. The George Institute conducts research in areas including food policy, injury, social determinants, health systems and sepsis, relating to Aboriginal and Torres Strait Islander health.

The George Institute continues to support the recommendations laid out within the [Uluru Statement from the Heart](#) in May 2017. We support enshrining a First Nations voice in the Australian Constitution that would give Aboriginal and Torres Strait Islander people control over decisions that affect their lives.

The Australian Government has many policies affecting Aboriginal and Torres Strait Islander peoples. The George Institute would like to see fundamental principles reflected within these and enacted in line with the [United Nations Declaration on the Rights of Indigenous Peoples](#). This includes the right to determine and develop priorities and strategies, to self-determine governance, and respect for Indigenous knowledges, cultures and traditional practices.

In relation to the National Health and Medical Research Council (NHMRC), The George Institute commends the ongoing engagement of Aboriginal and Torres Strait Islander health leaders and organisations in determining research priorities and opportunities. We encourage the NHMRC to continue to offer Aboriginal and Torres Strait Islander-specific funding and targeted calls for research, and to ensure that these opportunities include recognition of social and cultural determinants of health and the impacts of systemic racism.

Coroners' reports recognise the recurrent failures of Australia's health systems in providing safe and quality care for Aboriginal and Torres Strait Islander people, and identify systemic racism as a core component. The National Safety and Quality Health Service Standards highlight the imperative to have specific Aboriginal and Torres Strait Islanders' actions ([Actions 2.13, 1.2; 1.4; 1.21; 1.38 & 5.8](#)).

## The 2021–22 Budget should...

Commit \$6 million into the National Health and Medical Research Council (NHMRC) Targeted Funding Round for health research that addresses systemic impacts of racism on the health and wellbeing of Aboriginal and Torres Strait Islander peoples and communities.

Commit \$2 million to support The George Institute to develop a 'readiness to change' assessment with Local Health Networks and implement site-based organisation interventions to address systemic racism, including leadership development, structured interdisciplinary discharge planning, Aboriginal patient journey mapping, communities of practice and implementation of trauma-informed care. This is in line with the National Safety and Quality Health Standards.



# The Health Innovation Hub: to turn ideas into products

## Challenge

Australia is a world leader in health and medical research, pioneering significant advances in the treatment and prevention of non-communicable diseases and injury. However, we must address a key limitation: inconsistent research translation and an environment that does not incentivise translation through commercialisation and entrepreneurship.

To remain a global leader in this space, our research community must mobilise and engage with industry and government to create affordable, efficient, evidence-based solutions to unmet health needs. This will position Australian medical research as an attractive partner to domestic and international collaborators and investors, stimulate economic activity and create new jobs.

## Current Status

In 2019, The George Institute created the [Health10x accelerator](#) program in partnership with UNSW Sydney. This accelerator supports and develops established health start-ups that are committed to tackling unmet health needs related to non-communicable diseases in under-resourced communities. Health10x has supported 70 new Australian start-ups since it began, and has worked with an additional 11 start-ups in India.

The George Institute seeks budgetary support in establishing the Health Innovation Hub as a dedicated ecosystem designed to facilitate the creation of new start-ups focused on translating The George Institute's research into the most pressing health challenges, and supporting them through to commercial success.

The Health Innovation Hub will be an idea incubator designed to facilitate the development of affordable, evidence-based health solutions that tackle the burden of NCDs in Australia and globally. Together with UNSW Sydney and the Randwick Health and Innovation Precinct, the Health Innovation Hub is uniquely positioned to nurture and accelerate new ideas through to scale-up, supported by the mentorship of industry experts and the brightest minds in medical research.

The Health Innovation Hub will draw on the global health expertise of The George Institute, UNSW Sydney and the Randwick Innovation Precinct to identify and prioritise unmet health challenges based on the needs of under-resourced populations, including Aboriginal and Torres Strait Islander communities. Teams will create and validate new solutions before being referred to the Health10x accelerator program, delivered by The George Institute and UNSW Sydney, to continue their journey toward creating new Australian companies and launching commercial medical products.

The  
2021–22  
Budget  
should...

Commit \$1.5 million to the Health Innovation Hub to help fast track the development of affordable health solutions for non-communicable diseases, build entrepreneurial capacity and create a pipeline of new Australian MedTech companies.

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