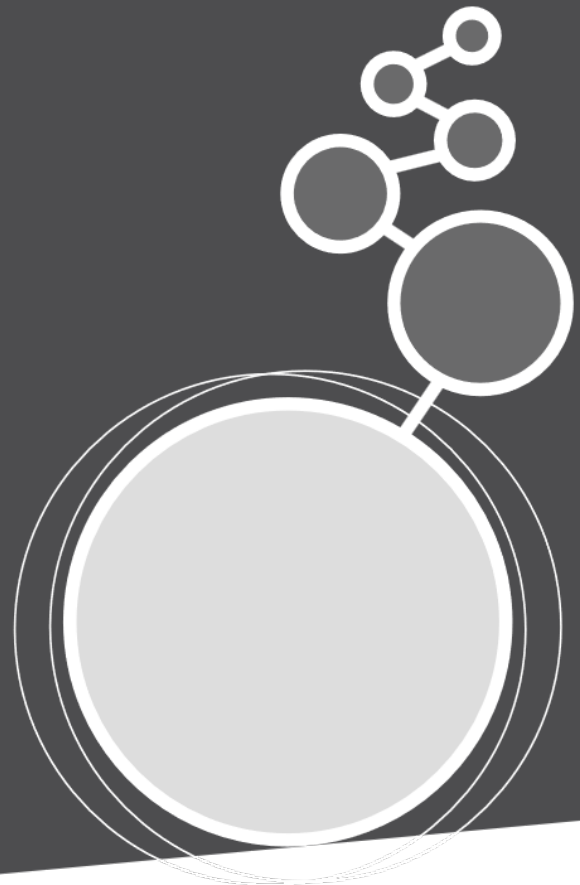


# Submission on improving alignment and coordination between the Medical Research Future Fund and Medical Research Endowment Account

14 July 2023



The Collaboration for Enhanced Research Impact (CERI) is a joint initiative between The Australian Prevention Partnership Centre and a diverse group of related NHMRC Centres of Research Excellence. We are working together to find alignment in the policy and practice implications of our work and to develop shared communications and early career capacity support across our participating centres. Please visit [our website](#) for a list of participating organisations.

# About the Collaboration for Enhanced Research Impact

The Collaboration for Enhanced Research Impact (CERI) is a joint initiative between The Australian Prevention Partnership Centre and 11 NHMRC Centres of Research Excellence. CERI aims to enhance the profile and impact of chronic disease prevention research in Australia.

Established in June 2020, this novel initiative brings together some of Australia's leading prevention researchers to develop shared narratives, work together to translate new knowledge, and support early- to mid-career researchers across all member institutions.

## About this submission

The Australian Government is undertaking a sector-wide consultation on whether, and if so how, to reform the governance and administration of the Medical Research Future Fund (MRFF) and the National Health and Medical Research Council's (NHMRC's) Medical Research Endowment Account (MREA) to ensure the Australian community obtains the greatest benefit from this investment in health and medical research.

The government is requesting feedback on three potential models for improving alignment and coordination of the government's investment in health and medical research. This consultation is not seeking input on a health and medical research strategy itself, but rather is seeking views on ways to optimise governance and administrative arrangements to support a more effective government health and medical research strategy.

CERI welcomes this opportunity to provide input into this consultation, which has the potential to improve equity in research funding and achieve greater impact in public funding for health and medical research.

## Introduction and scope

This submission is made on behalf of The Australian Prevention Partnership Centre and the CERI as represented by a submission working group.

Our focus is preventive health research, particularly population-based research for prevention of chronic disease. This submission will refer to our collective research as 'prevention research' throughout.

## The role and value of prevention research

Health is a human right, yet preventable illness and inequality still result in disability and death affecting millions of people globally every year. Nearly half of Australians (11.6 million people) have one or more chronic condition,<sup>1</sup> with vulnerable communities disproportionately affected.

Australia has one of the highest rates of obesity in the world and our communities spend the highest number of years in ill health compared with other OECD countries.<sup>2</sup>

The cost of chronic diseases to the community is considerable – and growing. Treatment of chronic diseases now consumes more than a third of health spending; in 2018–19, about \$24 billion in health spending was attributable

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<sup>1</sup> Australian Bureau of Statistics. Health Conditions Prevalence. <https://www.abs.gov.au/statistics/health/health-conditions-and-risks/health-conditions-prevalence/latest-release>

<sup>2</sup> Productivity Commission 2017, Shifting the Dial: 5 Year Productivity Review, Report No. 84, Canberra <https://www.pc.gov.au/inquiries/completed/productivity-review/report>

to risk factors such as poor nutrition, physical inactivity, tobacco smoking and harmful alcohol use.<sup>3</sup> As much as 38 per cent of this burden could be prevented through public health initiatives.<sup>2</sup>

Prevention research focuses not on finding new increasingly costly treatments and medications, but on improving the health of Australians and protecting the health system through addressing the determinants of health.

Prevention research provides the evidence base for large-scale, population-wide initiatives that prevent avoidable disease, injury, disability and death and promote healthy and sustainable environments. It goes beyond the illness paradigm to focus on prevention and equitable optimal health for the whole population.

Prevention initiatives have delivered significant impact for the community and saved hundreds of thousands of Australian lives in the last 20 years,<sup>4</sup> for example through:

- Reduced deaths from tobacco consumption
- Prevention of deaths from bowel and breast cancer
- Reduced road death and injury toll
- Reduced incidence of skin cancer in young adults

A review and analysis of current and future trends in prevention research identified that this research is impactful and relevant to the needs of policymakers, practitioners and the community.<sup>5</sup> Prevention research addresses the following significant threats to human and planetary health:

- Poor diet and nutrition, malnutrition in all its forms, food systems and food insecurity
- Built environment linked to urban health, better transport and increased physical activity
- Environment and health, including air pollution, planetary health and climate change
- Determinants of health including social, commercial, economic and legal determinants, with a focus on health equity
- Personalised prevention of chronic disease, such as through digital health, precision medicine and big data.

The response to the COVID-19 pandemic illustrated the importance of a well-resourced public health workforce along with a rapid prevention research response to inform policy.

The need for high quality, independent and policy relevant prevention research is ongoing. We know that people living with ill health, such as obesity, high blood pressure and diabetes, experience significantly higher rates of COVID-19 morbidity and mortality. Prevention of the disease burden through addressing risk factors such as poor diet, obesity, alcohol use, tobacco smoking and insufficient physical activity is crucial in building resilience against emerging health threats.<sup>6</sup>

Prevention research creates numerous co-benefits, such as for the community, income and wealth equity, education, housing, employment and families.<sup>7</sup> For example, reducing reliance on cars through addressing the built environment is beneficial for health (with increased physical activity) and also for reducing congestion, pollution and carbon dioxide emissions.

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<sup>3</sup> Australian Institute of Health and Welfare 2022. Health system spending per case of disease and for certain risk factors. <https://www.aihw.gov.au/reports/health-welfare-expenditure/health-system-spending-per-case-of-disease/contents/about>

<sup>4</sup> PHAA, Top 10 public health successes over the last 20 years, PHAA Monograph Series No. 2, Canberra: Public Health Association of Australia, 2018. <https://www.phaa.net.au/documents/item/3241>

<sup>5</sup> Marks L, Howse E, Rychetnik L, Wilson A. Current and future trends in chronic disease prevention: Thematic analysis of grey and scientific literature. The Australian Prevention Partnership Centre. April 2020. <https://preventioncentre.org.au/resources/prevention-research-grey-scientific-literature/>

<sup>6</sup> The Australian Prevention Partnership Centre. 'Chronic disease, health equity and COVID-19'. <https://preventioncentre.org.au/news/chronic-disease-health-equity-and-covid-19/>

<sup>7</sup> The Australian Prevention Partnership Centre. 'What are the co-benefits of prevention?' <https://preventioncentre.org.au/about-prevention/what-are-the-co-benefits-of-prevention/>

Prevention research meets Australian research funding priorities and strategic objectives. It is well placed to answer many of the critical knowledge gaps facing policy and practice, including disease prevention in priority populations such as Aboriginal and Torres Strait Islander people and those living in rural and remote areas, who are disproportionately vulnerable to emerging health threats.

Prevention research meets the following NHMRC research funding priorities:<sup>8</sup>

- Strengthening resilience to emerging health threats and emergencies, including environmental change, pandemics and antimicrobial resistance
- Improving the health of Aboriginal and Torres Strait Islander people including through research that addresses health inequities
- Building capacity and innovation in the effective translation of research into quality health policy, services and care
- Preventing and managing multimorbidity and chronic conditions

Prevention research meets the following MRFF strategic objectives:<sup>9</sup>

- Equitable health outcomes through research-informed preventive health and health care across the spectrum from primary to tertiary care
- Health and economic benefits from transformative and innovative research through translation of outcomes into policy and practice, and commercialisation of new diagnostics, therapeutics, and preventive health interventions
- A skilled and sustainable health and medical research workforce with expertise in research translation, innovation, and commercialisation
- A health and medical research sector and health system positioned to respond to emerging and future challenges.

Prevention research also aligns with the following MRFF priorities:

- consumer-driven research
- research infrastructure and capability
- translation
- preventive and public health research
- primary care research
- health and medical researcher capacity and capability
- Aboriginal and Torres Strait Islander health
- priority populations
- global health and health security
- health impacts from environmental factors
- data, digital health and artificial intelligence.

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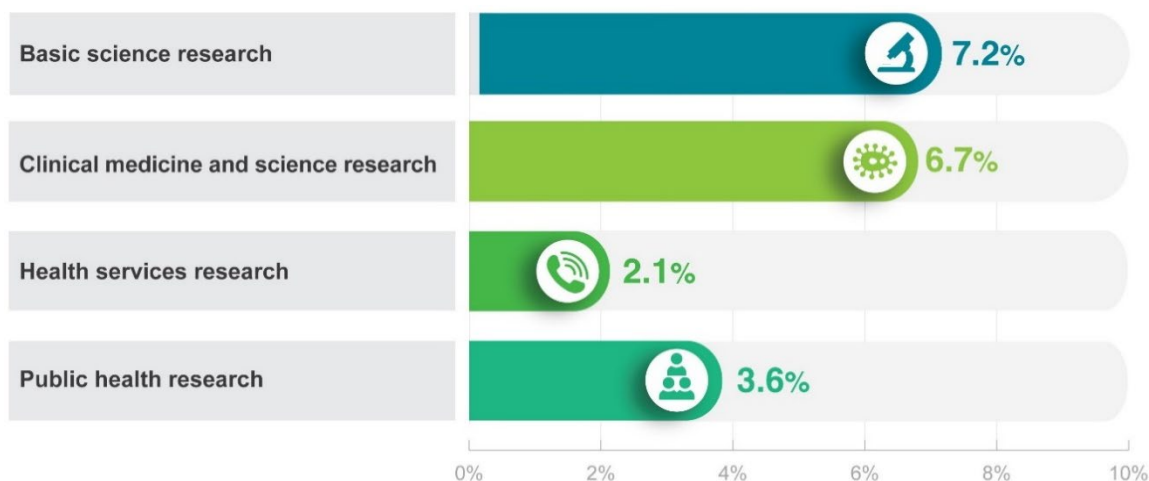
<sup>8</sup> NHMRC. 'Health priorities 2021–2024'. <https://www.nhmrc.gov.au/research-policy/research-priorities/nhmrc-health-priorities>

<sup>9</sup> Australian Government Department of Health and Aged Care. 'MRFF Strategy and Priorities'. <https://www.health.gov.au/our-work/medical-research-future-fund/about-the-mrff/mrff-strategy-and-priorities>

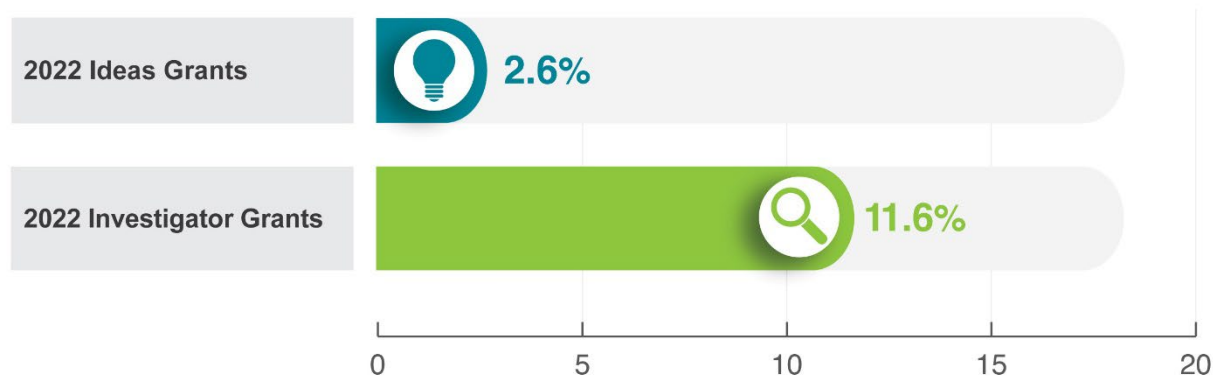
## Inequity in funding for prevention research

Despite the increasing importance of prevention research, outlined above, and its close alignment with NHMRC and MRFF strategic priorities, funding for prevention research in Australia is disproportionately low relative to other fields and compared to other OECD countries.<sup>10</sup>

**FIGURE 1: 2021 Medical Research Future Fund (MRFF) Early to Mid-Career Researchers Grant opportunity outcomes (%)**



**FIGURE 2: 2022 National Health and Medical Research Council (NHMRC) successful applications related to chronic disease and injury prevention (%)<sup>11</sup>**



\* Includes 2021 PRC2 (Peer Review Cycle), 2021 PRC3, and 2022 PRC1.

Note: Prevention research has a higher success rate in CREs and Partnership projects, but these are significantly smaller schemes

<sup>10</sup> Australian Government Department of Health and Aged Care. 'Medical Research Future Fund. Data about the MRFF – 2021 Early to Mid-Career Researchers Grant Opportunity Outcomes.' <https://www.health.gov.au/sites/default/files/2023-04/data-about-the-medical-research-future-fund---2021-early-to-mid-career-researchers-grant-opportunity-outcomes.pdf>

<sup>11</sup> National Health and Medical Research Council. Ideas Grants 2022 Outcomes Factsheet. [https://www.nhmrc.gov.au/sites/default/files/documents/attachments/Ideas\\_Grants\\_2022\\_Outcomes\\_Factsheet-web\\_0.pdf](https://www.nhmrc.gov.au/sites/default/files/documents/attachments/Ideas_Grants_2022_Outcomes_Factsheet-web_0.pdf); National Health and Medical Research Council. Investigator Grants 2022 Outcomes Factsheet. [https://www.nhmrc.gov.au/sites/default/files/documents/attachments/Investigator\\_Grants\\_2022\\_Outcomes\\_Factsheet\\_updated%20%281%29\\_0.pdf](https://www.nhmrc.gov.au/sites/default/files/documents/attachments/Investigator_Grants_2022_Outcomes_Factsheet_updated%20%281%29_0.pdf)

## Structural barriers to funding for prevention research

There is a fundamental problem in the way research proposals are assessed that disadvantages prevention research. This is particularly true for large-scale systems-based research that is most likely to be impactful in terms of human health and equity.

Public health is a population-based and highly applied science, and many of our research proposals seek to address large-scale complex problems with social, structural, legal and political elements, including obesity, high alcohol use, inadequate housing and climate change. Small scale prevention interventions or proof-of-concept studies, if funded, are unlikely to demonstrate an effect.

To address the complexities of chronic disease prevention, we have come to realise that research needs to embed co-design and co-production with stakeholders including relevant community representatives and decision makers. This should commence with the articulation of research priorities and how the research should be conducted, and should be integral to the way research proposals are assessed and implemented.

However, research assessment criteria are typically based on laboratory and clinical science methods, which do not recognise the critical skills and infrastructure required for effective prevention research, and therefore undervalue the potentially most useful public health proposals that seek to understand the complexities of prevention.

As a result, prevention research remains the most neglected of the NHMRC's four pillars. The approach of most NHMRC schemes is quite limited and grants are reviewed by conventional reviewers, most with clinical rather than public health backgrounds. As a result, successful grants are skewed toward discovery and clinical trials.

With its focus on applied research, the MRFF is currently the only realistic way of funding applied prevention research. However, the transformative potential of the MRFF is curtailed by narrow measures of success that call for "new health treatments, drugs, interventions, devices and diagnostics" that should become embedded in clinical practice, targeting established disease and missing prevention opportunities.

It is clear that most public health research applications are severely disadvantaged when assessed in this context.

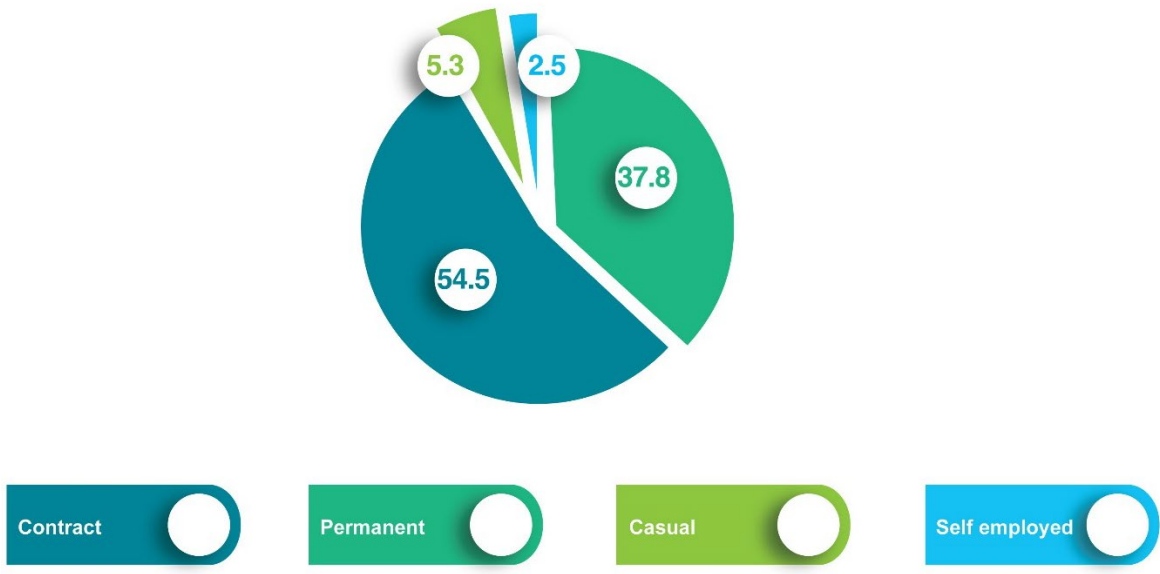
## Effect on the prevention research workforce

Not only does this situation mean there are very few potentially transformative, policy-relevant prevention research initiatives being funded, it also means there is a significant opportunity cost to prevention researchers in writing grant applications that have virtually no chance of success.

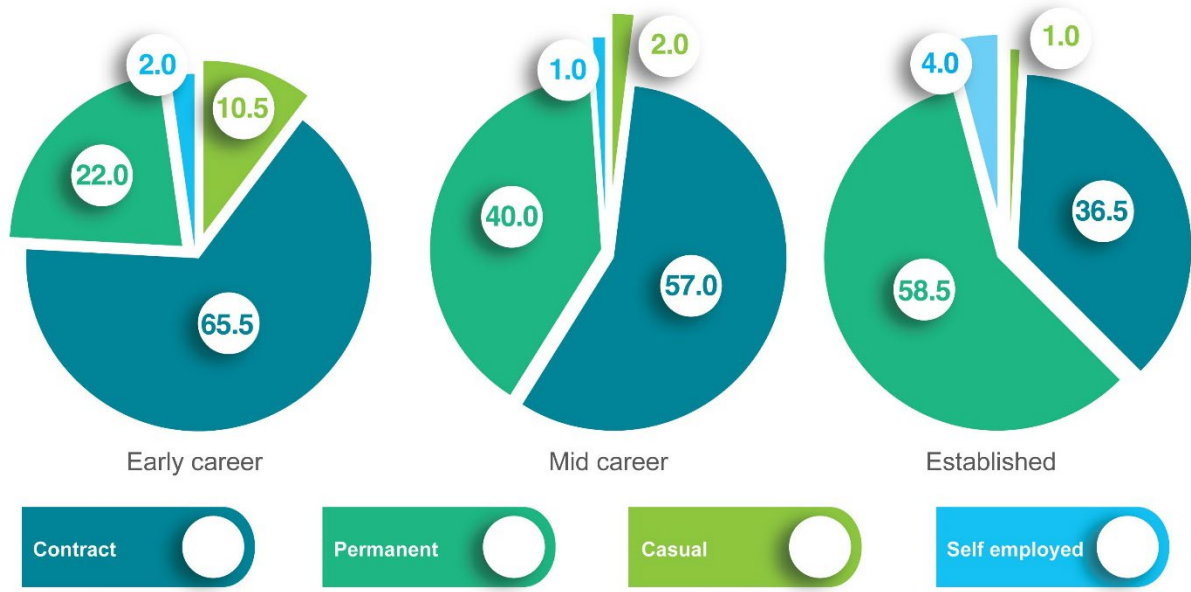
Both existing schemes advantage senior investigators over early/mid-career researchers (EMCRs) and lead to considerable duplication of effort, with little apparent coordination to address national preventive health priorities.

The wellbeing and retention of researchers, especially EMCRs, is now being significantly affected. Chronically underfunded and undervalued prevention research opportunities along with long-term job insecurity and the casualisation of the university workforce are ongoing issues for all prevention researchers, and especially EMCRs. These are creating a brain drain from the field, with no currently available plans to develop and invest in a strategy to support the prevention research workforce.

**FIGURE 3: Health and medical research workforce by terms of employment (%)<sup>12</sup>**



**FIGURE 4: Health and medical researchers career stage by terms of employment (%)<sup>12</sup>**



<sup>12</sup> Research Australia, August 2020. COVID-19 series report 2 – A second survey on the impact of COVID-19 on health and medical researchers. <https://researchaustralia.org/covid-19/>

## Comment on proposed funding models

It is critical that strategic prioritised research is protected in Australia. Any discussion about research funding arrangements in Australia must take into account the necessity of supporting applied research that directly meets the needs of stakeholders to address critical health problems in Australia.

We strongly support better integration and coordination between NHMRC and MRFF. However, our focus is on strategy before governance.

None of the models proposed is fit-for-purpose for transformative prevention research. Each of them risks amplifying the issues for prevention research laid out above.

Our concerns include:

- There is a risk that investigator-driven research will dominate priority-driven research
- The MRFF's current ability to respond to emerging issues and national priorities will be watered down
- Review panels will not have the expertise to review quality prevention research proposals
- The critical priorities of prevention, public health, health services and Aboriginal and Torres Strait Islander health research will continue to be underfunded.

## Our recommendations

We suggest in the current context that there needs to be a review of prevention inequity in research outcomes considered in this process, in both the NHMRC and MRFF schemes, similar to the 2021 NHMRC review by gender inequity of outcomes of its Investigator Grant scheme. This will ensure we clearly recognise and fully understand the currently low rates of funding for prevention.

We suggest that elements of the following international funding structures for prevention research are considered:

- Canada's funding for knowledge translation chairs and fellows – incorporating a particular focus on prevention
- New Zealand's expressions of interest system, in which only those with a chance of funding progress to full grant applications, and unsuccessful EOIs receive detailed feedback
- The UK's National Institute for Health and Care Research, which provides a model of sustained applied research in clinical, public health and health services research and embeds co-design and co-production.

Whatever the proposed funding model, it is essential that it consider the following.

### A dedicated funding pathway for prevention research

There is an urgent need for improved equity in funding for prevention research that addresses national priority areas, including those set out in the National Preventive Health Strategy, National Obesity Strategy, National Tobacco Strategy and those likely to be highlighted by the Australian Centre for Disease Control.

Ways of doing this include through the introduction of prevention research fellowships or infrastructure support funding for the large, complex partnerships required for many successful public health projects.

### Assessment criteria that are appropriate and fit-for-purpose

Prevention research cannot be compared to clinical research or basic science, and requires distinct funding metrics that are fit-for-purpose for the field.

Any new funding structure must create the mechanisms for large-scale, consumer-informed research/policy/practice partnerships that are more likely to achieve our longer-term aims of preventing disease and improving health and wellbeing.



## Clearer definitions of prevention research

Much of the prevention research that is currently funded does not focus on the systems problems we are trying to address. Rather, it is clinically and biomedically focused.

There is a need for clearer definitions of public health, prevention and health services research to ensure research is funded consistent with stated priority areas.

## Stakeholder input in priority setting

Prevention research cannot improve health and wellbeing unless it answers the questions that our partners – the decision makers - need answering.

Whatever the new funding model, it is crucial to maintain scope for applied research that is driven by the needs of our stakeholders, including community, policy, consumers and industry, along with investigator-driven research.

## Conclusion

We understand that this consultation is a first step and does not address the proposed new national strategy for health and medical research.

Our view is that it is not feasible to decide on the details of a new governance model without first clarifying what the vision and strategy will be and developing governance and structure to deliver what we are aiming to achieve.

However, this consultation provides an opportunity to develop a model that is fit-for-purpose to enhance the scope for adequately supporting prevention research funding, to determine where funding for prevention research should sit, and to establish a clear funding pathway.

Doing so will ensure more equitable distribution of public research funding, remove duplication of effort and opportunity costs of grant writing, and relieve the unsustainable pressure on our prevention research workforce, particularly EMCRs.

It will also create opportunities for Australia to build the evidence that is required to inform and evaluate national and state prevention policy, and fulfil our potential to continue to be world leaders in public health research and practice.