

Medical Research

Future Fund

Australian Medical Research and Innovation Strategy 2021-2026 and the related Australian Medical Research and Innovation Priorities consultation report

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Introduction

This report details the processes undertaken by the Australian Medical Research Advisory Board (AMRAB) in consulting researchers, health service providers, stakeholders and consumers on the 2021-26 Australian Medical Research and Innovation Strategy (Strategy) and related Australian Medical Research and Innovation Priorities (Priorities).

The provision of a consultation process when developing a new Strategy or new Priorities is a requirement of the *Medical Research Future Fund Act 2015*. The consultation process also ensures that a consumer perspective as well as additional expert and stakeholder perspectives (beyond those provided by AMRAB) were considered and reflected in the formulation of the Strategy and Priorities.

Consultation process

Public consultation was conducted from 20 September 2021 to 11 October 2021, and was comprised of:

- a public webinar (28 September 2021)
- a targeted virtual roundtable (30 September 2021)
- public submissions (institutional and individual) through the Department of Health's consultation hub and email.

Consultations were guided by a series of questions to ensure consistency in the provision of input across consultation activities.

Submissions received through the consultation hub were summarised and feedback was grouped into themes. These themes, as well as input from the webinar and roundtable, and the emailed submissions informed AMRAB's deliberations in formulating the 2021-26 Strategy and the related Priorities.

Consideration of input from the consultation process provided AMRAB with assurance that the 2021-26 Strategy and related Priorities reflect national health priorities and future needs, and that funding decisions from the MRFF that take the Strategy and Priorities into account will deliver practical benefits from medical research and medical innovation to all Australians.

Report structure

This consultation report provides a record of the input received from the consultation process described above and aggregates the key inputs from that process.

The report is structured as follows:

- Details of metrics relevant to the consultation process
- A summary of the themes identified in response to the questions used through the consultation process, with examples of specific comments received in relation to those themes
- A summary of AMRAB's responses to the themes identified in relation to the Strategy
- A summary of AMRAB's responses to the themes identified in relation to the Priorities
 Appendix A, which provides a breakdown of the most frequent themes raised in the submissions.

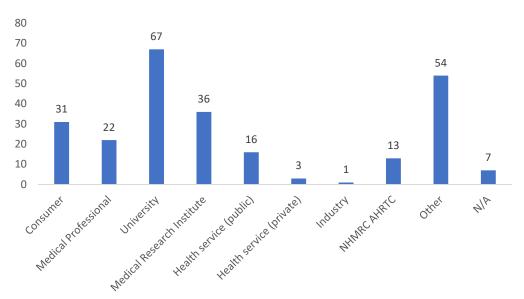
• Appendix B, which provides a consolidated write-up of the roundtable report.

Consultation metrics

Table 1: Stakeholder involvement

Stakeholder interaction	Number
stakeholder submissions - consultation hub	201
stakeholder submissions - email	91
stakeholders attending public webinar	214
stakeholders ² attending roundtable	25

Figure 1: Respondent organisation / affiliation - submissions from consultation hub



Please note no further details were provided on respondents who stated other or n/a for their affiliations.

Please note several submissions selected multiple organisation types.

¹ As some email submissions were provided after the close of the formal consultation period these are not included in the data in the figures below, although feedback on the broad themes is captured in text elsewhere in this document.

² Stakeholders attended as representatives of a wide range of organisations (see Appendix B for details).

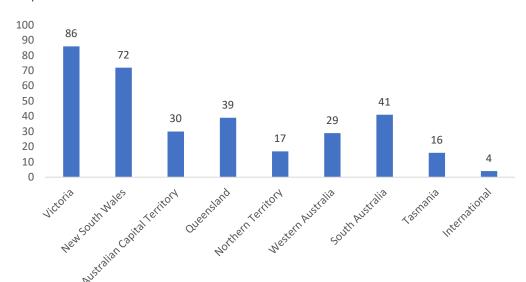
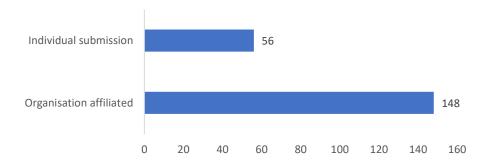


Figure 2: Respondent location - submissions from consultation hub

Please note no further details were available on respondents who stated an international location.

Please note several submissions selected multiple locations.

Figure 3: Respondent submission type - submissions from consultation hub



Please note several submissions selected both submission types.

Summary of public consultation submissions

Question 1: Could the current Strategy be altered to better meet the purpose set out in the MRFF Act? If so, how?

Overarching theme	Detailed Feedback taken from the submissions - synthesis
Consumer engagement – 41 ³	The Strategy needs to invest in building consumer and researcher capacity to partner in meaningful ways to support the need for more consumer-led research.
	Greater consumer engagement in all steps of the research process, including co-design, implementation, evaluation and up-scaling of findings locally.
	 Consumer engagement and co-design is especially important in rural and remote communities, as well as Indigenous communities, to ensure local relevance and uptake.
	Signal to the research sector the importance of consumer co-design through the explicit encouragement of consumer co-researchers and co-authors.
Translation of research – 28	The MRFF has an opportunity to set a clearer strategic focus on translation and health system and community health impact, which will set it apart from (and complement) other national and state and territory funding sources.
	• The current Strategy identifies Trials and Translation as a key platform but does not specifically address Australia's persistent failure to catch up with more successful overseas systems (e.g. UK, US, Singapore) that deliver much more efficient translation.
	The Strategy should include a commitment to building clinical research and translator capacity and capability, to improve the prospects of MRFF and other public investments in medical research being translated for the benefit of all Australians.
	MRFF programs should explore ways to incentivise research that includes explicit focus on the translation of findings to policy and practice.
	The MRFF strategy needs to consider the incorporation of a translational pipeline from discovery to clinical trials, and strong teams to support collaboration, to accelerate research and benefit patients.

³ Number of times this theme was mentioned in submissions

Overarching theme	Detailed Feedback taken from the submissions - synthesis
Coordination of effort – 27	 MRFF investments should co-ordinate with the NHMRC. The new Strategy should commit to the development of a single national strategy for health and medical research that delivers co-ordinated investment from the MRFF and NHMRC.
	 The Strategy needs to be aware of other investments and to operate in a way that is complementary, avoids duplication, and ensures that key research capability areas are not neglected.
	• The Strategy should consider an in-depth review of alignment opportunities between MRFF, NHMRC and other research funders across Australia's research landscape.
	 Align the Strategy with existing national and sub-national priorities as expressed by National Health Strategies or plans that guide research, policy and clinical service.
Clearer linkages – 27	Explicitly outlines the objectives of the strategic platforms to improve understanding of the longer-term goals/directions so that researchers can better position themselves going forward.
	Improve clarity on how the Strategy and Priorities relate to the Plans and Program for the MRFF.
	• Embed mechanisms into the strategy that create a clear line of sight between the various layers of policy documents, research calls, and outcomes. This will improve links to the Priorities, 10-year investment plan, Missions and programs, research grant opportunities and evaluation.
Collaboration - multidisciplinary and multisectoral – 25	 An emphasis that clinical care alone does not make people well would stress some additional points of difference to other more 'traditional' sources of health and medical research funding such as the NHMRC. It would also stimulate more novel, and diverse cross-sectoral research collaborations.
	• Collaboration between clinicians, researchers and end users can deliver the new practices, services and products needed to improve the health and wellbeing of the population. The Strategy needs to establish robust mechanisms to enable all stakeholders to agree shared priorities and to consider how to scale innovation so that all Australians can benefit.
	• The strategy could better account for the stated purpose of supporting medical innovation by supporting cross-sector, cross-discipline and cross-institution programmes of research because these are demonstrated most likely to facilitate innovation and potential transformation.

Overarching theme	Detailed Feedback taken from the submissions - synthesis
Burden of Disease – 25	 A greater emphasis should be placed on the MRFF Act priorities including: burden of disease; greatest reach; greatest value; and complementarity to other medical research and innovation. Achieving these priorities suggests the need for an explicit focus on prevention. A more agile set of health priorities, reflecting current and changing health needs, may be beneficial to achieve the purpose of delivering practical benefits from medical research and medical innovation to as many Australians as possible. Existing Priority Areas do not reflect current and future health needs and reflect outdated burden of disease.
	 Strategy should identify specific diseases for treatment or, indeed, prevention. Therefore, burden of disease, or prevention of disease through greater knowledge, should be central to MRFF strategy/priority areas. Current platforms overlook crucial areas that fundamentally affect our health, wellbeing, and likelihood of suffering from chronic disease.

Question 2: What are the most critical current and future issues and factors impacting on the health system, including primary prevention, and on the health and medical research sector that the next Strategy needs to address?

 Critical current and emerging issues for the health system will demand focus on risk prediction and prevention. This will also necessitate a translational shift towards primary care practice and intervention. The growth in the burden of non-fatal diseases, with increased life-expectancy, and poor lifestyle habits supports a need for developing innovations for chronic diseases and ensuring they are translated to the health professionals who are treating these patients. Increasing access to existing health programs and services, particularly in primary prevention. More research is needed to streamline and enhance these programs so they have wider benefit and efficacy. Research into understanding disease causation and related mechanisms, and where possible, preventing these will reduce the impact for individuals and reduce the need for clinical and community service support. Secondary prevention to understand and address inequities associated with post-discharge follow up, that result in increased mortality and decreased quality of life. 	Overarching theme	Detailed Feedback taken from the submissions - synthesis
	Preventive Health - 31	 will also necessitate a translational shift towards primary care practice and intervention. The growth in the burden of non-fatal diseases, with increased life-expectancy, and poor lifestyle habits supports a need for developing innovations for chronic diseases and ensuring they are translated to the health professionals who are treating these patients. Increasing access to existing health programs and services, particularly in primary prevention. More research is needed to streamline and enhance these programs so they have wider benefit and efficacy. Research into understanding disease causation and related mechanisms, and where possible, preventing these will reduce the impact for individuals and reduce the need for clinical and community service support. Secondary prevention to understand and address inequities associated with post-discharge follow up, that result in

Overarching theme	Detailed Feedback taken from the submissions - synthesis
Health Research Workforce – skills, capacity and capability - 28	 Funding towards clinical research fellowships to strengthen the research workforce that will strengthen research design and implementation. Capacity building is a key issue in the sector. The medical research profession, spanning discovery through to implementation, is critically underfunded. This workforce underpins the success of the MRFF, and current initiatives have oblique responsibilities to support them. Early and mid-career researchers require significant development opportunities, fellowships, and targeted subprograms to attract research talent and ensure Australia can tackle complex health challenges into the future. The ability to deliver high-quality research, healthcare and translation into practice is challenged by workforce capacity (researcher and practitioner), growing demand, complex patient co-morbidities, inadequate infrastructure and poor integration across a fragmented healthcare system. Long-term job insecurity as a result of chronically underfunded and undervalued public health research opportunities is limiting the long-term career progression of EMCRs, particularly for women. This is particularly important given new expertise needed in the research sector to support technology advances, precision medicine and health systems research.
Translation of research - 24	 A critical issue is the failure to translate our country's internationally excellent health and medical research into clinical practice change. This reflects insufficient investment in a dedicated research and translation workforce embedded in the clinical frontline. Improving research translation and implementation through more efficient communication of outcomes and focused impact plans, which include dissemination of findings to all levels of practice and mandating end user engagement. Prioritising implementation and translation of MRFF funded research by requiring processes that consider how to integrate innovations within health care settings are required. Recognition that research translation is not just about commercialising products but also about achieving impact through the translation of research into practice and policy and then sustaining change. MRFF is in a strong position to drive this outcome to ensure tangible impact and improvements. Delivering improved outcomes can be achieved through translatable collaborative research across healthcare-academic environments responsive to local priorities, skills and needs, incorporating all aspects of service delivery from primary prevention to tertiary health care. As translation occurs locally in response to context, the Strategy should direct MRFF support towards locally led research and innovation.

Overarching theme	Detailed Feedback taken from the submissions - synthesis
Collaboration - multidisciplinary and multisectoral - 22	 Encourage the health and medical research sector to engage more effectively with international consortia and capitalise on the significant investment and research infrastructure globally. A challenge in the sector is poor integration across a fragmented healthcare system leading to disjointed care. This compromises efficiency/effectiveness of our care deliveries and hinders collaborations/knowledge exchange across subspecialties, impacting patient outcomes. Collaborative research programs should be supported involving industry, academia and publicly funded research agencies as well as international partners to efficiently deliver truly end-to-end solutions enabling Australia to expand and diversify research capacity and establish sovereign platform manufacturing capabilities. More should be done to develop collaboration between a variety of researchers, health system, industry, investors, government and other stakeholders and consumers, including investors. Collaborations will better enable translation across the pipeline. To have impact on the health system, health and medical research support should consider the entirety of the health system and the interconnectivity between these components from the perspective of patient and population health and wellbeing, including patient transitions between services.
Health equity - 19	 Poorer clinical outcomes are documented in vulnerable populations, in part due to barriers around access and affordability of care, highlighting the need for increased use of technology and alternative models of health service to meet the needs for personalised care. The importance of Indigenous sciences and ways of knowing, being and doing are valid and cultural health research is as important as clinical research. This should be acknowledged and align with National Agreement on Closing the Gap Priority Reform 3. Inequity exists in the Australian health system, particularly in gender, ethnicity and geography. The lack of access by individuals and communities to quality healthcare creates barriers and risks. The next MRFF Strategy should play an important and strategic role to address inequities. Equity, access and social determinants of health have been shown to impact on access to health care. Priorities should be broadened from Aged and Aboriginal and Torres Strait Islanders to include CALD groups, women, those that are financially disadvantaged and other disadvantaged groups.

Question 3: Suggest options for how the next Strategy could address these critical issues and factors?

Overarching theme	Detailed Feedback taken from the submissions - synthesis
Collaboration - multidisciplinary and multisectoral - 39	 Emphasise the growing complexity of addressing health issues and the need for a multi-faceted approach. Systems approaches should be emphasised, and interventions need to be applied outside of health systems. Prevention is highly cost effective, and there should be a greater emphasis on public health and prevention in the next MRFF strategy and priorities. Project guidelines and funding calls could be structured in a way that allows comprehensive input and, where relevant, leadership of research teams in all of the disciplines necessary to provide new understandings, insights and interventions that improve the health and wellbeing of Australians. More funding proposals are required that span and integrate disciplines. Currently, funding is siloed into basic, clinical, population health or health services research. Encourage multidisciplinary and cross-disciplinary teams of both clinical and academic researchers to work together to solve critical challenges. Non-clinical researchers are also vital to addressing challenges in public health and health services research and could also address research pipeline issues.
Health Research Workforce – skills, capacity and capability - 26	 Support the multidisciplinary research workforce needed to deliver priority research, including clinician-scientists across different healthcare settings such as primary care, nursing, midwifery and allied health, and extend to those who can accelerate translation e.g. social scientists, policy experts and "entrepreneurial" researchers. A career pathway support scheme should be considered for researchers who show excellence and promise in their field of endeavour (not just biomed or basic science based). Focus on Aboriginal and Torres Strait Islander-led research ensuring an equitable allocation of research funding occurs. Funding should be equity based and ensure a perpetual funding base to create a strong and sustainable future for Aboriginal and Torres Strait Islander health researchers and organisations. Each Priority and research call should have consideration for early to mid-career researchers, women at all levels, and Indigenous researchers. Each Priority and grant should then allocate a portion of funding specifically for career development purposes. This should be linked to workforce strategies. Support investment at scale targeted towards building Clinician Researcher-Translator capacity (existing translation-skilled health service staff lack funded time to deploy their expertise) and capability (there are critical skills shortages in, for example, digital health and implementation science).

Overarching theme	Detailed Feedback taken from the submissions - synthesis
Consumer engagement - 24	 Both consumers and unpaid carers should have a role in guiding the MRFF research agenda and should have representation on the AMRAB. Support consumer/community voices, both advocates and representatives, to be integrated into all aspects of MRFF processes – assessing funding applications, being part of projects that receive funding and evaluating the MRFF for achieving its goals. Include consumers at all levels of research development, policy and implementation through provision of capacity and funds for their involvement, training and resources. This should include on panels for assessment of successful project applications. Grant proposals should require consumer/community led, or at minimum have clear engagement with consumers/community to demonstrate that it is research desired by the community to be translated and not just of academic interest. The involvement of Aboriginal and Torres Strait Islander people as end-users throughout the whole medical research eco-system is vital.
Translation of research - 20	 Take a more systematic approach to the translation of research findings to consumers, including by continuing and extending on the innovative work happening under the auspices of translational research groups and centres working in the MRFF primary care research stream. Take a whole-of-pipeline approach to funding programs. Programs that truly engage the basic sciences in developing deep solutions and funding and evaluation that enables translational pathways to be established have the potential for greatest impact. Investment should address the key clinical translational workforce gap affecting metropolitan, regional, and rural health economies, helping to bring translational impacts of MRFF research to all Australians. Fund full cost of research and translation: research translation requires a highly skilled and well-funded system, spanning the pipeline from discovery to commercialisation. Research translation is also dependent upon researcher and practitioner training. The MRFF cannot solve what is a whole-of-government challenge, but it is uniquely placed to lead and advocate for a solution.
Support for Clinician Researchers — 19	 Support investment to provide time for Clinician Researcher-Translator to drive the translation of health research in health services, and to develop the skills, knowledge and expertise of clinician researchers in key areas such as digital health and implementation science. Specific funded Clinical Fellowships for the development of researchers.

Overarching theme	Detailed Feedback taken from the submissions - synthesis
	 Targets and targeted schemes: for early and mid-career researchers (EMCRs), clinical researchers, health practitioners (broadly defined), and projects involving consumer/community engagement and serving disadvantaged population groups. Articulate a way forward that collaborates with state governments to support clinician scientists. Also consider legitimising important partnerships between clinicians and academics as both need each other to ensure a focus on end-users' needs and the application of current of scientific methods.
Preventive Health - 19	 Embed public health research to build the evidence base for prevention and create a sustainable health system that is not overburdened by preventable chronic disease. Establish Prevention Fellowships to support capacity building of prevention and public health EMCRs. A prevention approach across the lifespan (from pregnancy and early years, adolescents and young adults through to aged care) will address both economic and societal responsibilities of government now and in the future. Prevention is highly cost effective, and there should be a greater emphasis on public health and prevention in the next MRFF strategy and priorities. Focus towards preventable chronic conditions including cancer, by investment in new prevention strategies. This approach will include assessing telehealth capabilities and other innovative technologies, many of which have been tested and trialled during COVID-19 with positive outcomes

Question 4: Given the new and significant impact of COVID-19 on health services and health research, how should the new Strategy address COVID-19 related topics and impacts?

Overarching theme	Detailed Feedback taken from the submissions - synthesis
Impact of COVID-19 - 51	 Unintended consequences of COVID-19 public health interventions and the disruption of health services require more focus. Additionally, there is the need to understand and respond to COVID-19 direct and indirect impacts on population mental health. Long COVID is still poorly understood and there is need to understand the health economics of post-acute sequalae of COVID-19. Socio-economic issues influence COVID-19 transmission and how we build resilience in individuals and communities. Understanding how economic and social structures impact health is key in identifying underresearched gaps.

Overarching theme	Detailed Feedback taken from the submissions - synthesis
	 More is needed to understand the pathophysiology of COVID-19 and along with new models of care, therapeutics, better pandemic quarantine and the need for ongoing surveillance and clinical trials. There is new data to be collected on vaccine safety, vaccine hesitancy, and the need to address health literacy gaps for culturally and linguistically diverse communities and Aboriginal and Torres Strait Islander peoples.
Preparedness for emerging health issues/pandemics - 26	 Preparedness efforts should include our ability to conduct trials of new treatments, models of care and vaccines in hospital and community settings, and collaboration with international and industry partners. Research grants focused on rapid responses should be provided through an abridged and accelerated application and review process. Domestic infrastructure also needs to be developed to ensure the rapid translation of critical research. A national outlook and strategy for health security is critical for Australia to build capacity and capability to identify critical emerging threats and respond effectively. Prevention, Preparedness, Response and Recovery Plans should also consider non-health impacts such as the overall impacts on productivity and the broader economy. There needs to by multidisciplinary and multisectoral collaboration and coordination when developing preparedness and response plans to future health emergencies.
Chronic disease - 16	 COVID-19 disease severity is worse for those with chronic disease. The high prevalence of chronic disease has been a major contributor to increased risk of hospitalisation, intubation, and death due to COVID-19. COVID-19 public health interventions have caused disruptions and delays in health services for chronic diseases as well as research into chronic diseases. A key area of focus should be the interaction between chronic diseases and COVID-19. The same biological environmental and socioeconomic factors that underlie chronic diseases also determine the risk of serious outcomes from COVID-19. The rise in chronic disease prevalence creates vulnerability to and will increase the severity of future pandemics.
Technology investment - 13	 The increased availability of telehealth should be further leveraged and developed as it continues to provide health services for ongoing care and is crucial for future health emergencies. New research should support the development and testing of remotely delivered forms of intervention and supports.

Overarching theme	Detailed Feedback taken from the submissions - synthesis
	 Ongoing research towards digital health solutions is needed to ensure that quality, consistency, and equity of health care remains. The technologies developed to address COVID-19 topics should extend to other health issues including the development of RNA medicines, genetic testing and gene editing. There should be processes to support Australian innovations that have resulted from the pandemic. There should be a focus on establishing research infrastructure and integrated health, biomedical and digital health research system capabilities to manage the coronavirus pandemic.
Health Research Workforce – skills, capacity and capability - 12	 Opportunities should be identified to rebuild those parts of the medical research sector that have been severely disrupted by the COVID-19. Solutions should focus on flexibility in patient recruitment, change of recruitment sites, delay in project milestones that will help to relieve some pressure within our research communities. The disruption and delay in many research projects through lack of access to laboratories is of great concern to researchers. Investment in researchers across the full spectrum of research, as described above, will be required to offset this effect. There should be prioritisation of Aboriginal and Torres Strait Islander leadership on COVID-19 within health services and research. The MRFF must consider a more holistic and 'ecological' approach to health research for Aboriginal and Torres Strait Islander people, including environmental, cultural, and social contexts, which are more appropriate in developing COVID-19 responses than mainstream research approaches. There should be better investment in the capacity of Australia's Early to Mid-Career Researchers in public health and prevention that can pivot to address emerging issues.

Question 5: Could the current Priorities be improved to better address the requirements under the MRFF Act? If so, how? This could include consideration of what elements of the Priorities work well to guide MRFF investments and what could be improved for research translation and impact?

Overarching theme	Detailed Feedback taken from the submissions - synthesis
Collaboration – multidisciplinary and multisectoral - 32	 A more strategic approach investing in larger packages of joined-up research programs that can have substantial impact on the priority areas. Multidisciplinary partnerships in areas including clinical research (clinical trials, translation and commercialisation) medical research and social science, and between healthcare sector and academic to enhance likelihood of translation to impact. Hospital-industry-university collaborations are models that should be fostered to drive scale and growth in the innovation pipeline. Prioritise joint approaches between public and private hospital systems and general practice, and support peak an coordinating bodies to drive collaboration and deliver capacity building programs. Additional research on understanding and mitigating the barriers to productive collaboration, cross-disciplinary an multi-perspective approaches and their incorporation into training and education of researchers would be desirable.
Consumer engagement -26	 Meaningfully embed Consumer and Community Engagement (CCE) in all aspects of MRFF and each monitoring/evaluation process. This requires integrating CCE across the entire MRFF system including resources to build capacity and skills. Patient organisations and consumers need to be appropriately resourced and remunerated to enable their effective participation in research. Patient organisations are often well equipped to drive, lead and manage research projects, including setting priorities, facilitating collaborations and ensuring the urgency of the research is kept front and centre. MRFF should provide guidelines for inclusion and funding of consumers to ensure a sustainable system of engagement from co-design of interventions to translation of outcomes. Provide training and resources, including well-resourced or well-functioning systematic support for consumers and community to improve experience of health care and health literacy, and to build capability to better engage in research process and can provide the input needed. Recognising the critical roles of carers in reducing the burden of disease, in supporting health services and system improvements and in consumer-driven research.

Our want in a thomas	Detailed Feedback taken from the submissions, southering
Overarching theme	Detailed Feedback taken from the submissions - synthesis
Health research workforce – skills, capacity and capability -23	 Build capacity in a range of disciplines, including health services research, health economics, biostatistics, data scientists, translation and implementation science, commercialisation. Capability should extend to STEM-based capabilities to undertake transdisciplinary research and develop medical innovation. To build critical mass in skills and innovation, a transdisciplinary workforce that brings together biomedical engineering, mathematics, computing, physics, and chemistry in partnership with life sciences and medical research is paramount to drive innovation in complex healthcare settings. Build capacity and collaboration throughout the whole-of-research pipeline to ensure the clinical relevance of discovery science and the ability to facilitate deep solutions to hitherto intractable health issues. Developing Fellowships in Health Services Research for early to mid-career researchers to develop the necessary interdisciplinary skills. These could include a period embedded in a service organisation (health service, NGO, community organisation) nominated in the application and a specific project/task that will enable the identified skills and experience to be developed.
	Strengthen the clinical-academic nexus through collaboration between academic institutions and healthcare
	providers, for clinician researcher training opportunities.
Translation of research -21	 Sustained and co-ordinated investment in building clinical researcher capacity and capability with specific research translation skills and expertise. MRFF investments could propel collaborations and connections between university and research sectors/academia and healthcare sector with existing industries and drive new developments to address national priorities. This could include fellowships/secondments to facilitate greater research translation and impact. Supporting roles, such as research translators that are employed within the primary health care sectors, with an emphasis on building health service capacity for ongoing translational research engagement. This requires an ongoing and sustained financial commitment to be effective. Funded initiatives must more closely consider not just unmet need in the health system but must also focus on working in partnership with health to develop, test and implement solutions that work in the real world, resource constrained health environment.
Transparency of MRFF process -17	Develop a clearer and transparent process for setting the MRFF's Priorities and how these are used to inform MRFF's grant funding opportunities (i.e. initiatives under the 10-year Plan) and allocation of funds to initiatives, including more consumer, community and other stakeholder engagement in the process.

Overarching theme	Detailed Feedback taken from the submissions - synthesis
	 An MRFF priority that addresses the need for co-ordination of national and local research needs and a transparent pathway for decision-making (both priority setting and project evaluation) could ensure that research better supports public health bodies and are seen to address recognised health needs. This would require formalised linkages between research advisory groups and decision-makers. The MRFF Priorities contain embedded impact/outcome measures, but better clarity needed on how these are used.

Question 6: What are the most critical current and future issues for the health system and the health and medical research sector that the next Priorities need to address through research translation/implementation?

Overarching theme	Detailed Feedback taken from the submissions - synthesis
Translation of research -30	 Sustained and co-ordinated investment in building clinical researcher capacity and capability with specific research translation skills and expertise. Coordinated approach to promote cross-sector collaboration between basic and clinical research, primary care and drug development to better drive translation of research, including commercialisation. Translation of research should include translation or application of research knowledge. This could include better utilising of knowledge to reduce research waste and investing in evaluation of research translation/implementation. Translation of discoveries regarding prevention and treatment depends on affordability for both consumers and the health system; therefore, affordability should be a measure of success. Research translation will be facilitated where data and other research assets developed via MRFF Missions can be accessed by an extended group or the broader research community, not just those who contributed to the original development. National research infrastructures are very well-equipped to assist with such access and NCRIS capabilities operate without seeking to own IP.
Collaboration – multidisciplinary and multisectoral - 22	 Partnerships across multiple research disciplines and all healthcare sectors to improve collaboration and integration to harness expertise, skills, networks and infrastructure for more robust research and research evaluation, and drive innovation. Support collaborations between researchers and other healthcare and health system partners. In particular, collaborations with not-for-profit organisations that are engaging consumers, including with rural and remote communities, to better understand and incorporate specific end-users' health and healthcare needs.

Our wants in a things	Detailed For dheal, taken from the subminions and their
Overarching theme	Detailed Feedback taken from the submissions - synthesis
	 Multi-disciplinary research focus will benefit patients, their support networks and healthcare providers from diagnosis through to survivorship, management of advanced disease and end of life care. Encouraging broad cross-disciplinary collaborations with particular attention to both animal health and the social sciences given their critical place in understanding the attitudes and behaviour that drive disease risks and are essential to supporting effective mitigation. To inform how to promote better collaboration, support for research on understanding and mitigating the barriers to collaboration, cross-disciplinary and multi-perspective approaches.
	Ruild the research leaders of the future across core areas critical to research translation (e.g. data scientists, health
Health research workforce – skills, capacity and capability -22	 Build the research leaders of the future across core areas critical to research translation (e.g. data scientists, health economists, imaging and visualisation specialists, multi-omics diagnostics, sophisticated clinical trialists, digital technologies and health informaticians).
	• It is important that the MRFF set gender equity-related targets for supporting health research workforce, and that it publishes relevant data.
	Consider support for part-time researchers. Solvent the light account to the second that account is not to the second that account is no
	 Enhance the linkages with tertiary public health education through the universities sector so that research is not just translational within the health care system and policy environment but also has practical inclusion within health and medical curriculum taught.
	 A barrier to research translation/implementation, particularly in regional, rural and remote areas, is the capacity and capability of the health workforce to engage in health research, education and training and clinical care delivery. This is most likely to be addressed by strong partnerships between health professionals, clinical and academic researchers and end users and between health care providers, tertiary providers and local communities.
Preventive Health - 20	 More focus on prevention, for infectious diseases (including emerging diseases causing pandemic) and chronic diseases, as it is more cost-effective.
	 Chronic diseases remain the greatest burden of disease in Australia, and much evidence suggests that funding in prevention provides the largest health and economic returns on investment. Focus on chronic disease prevention, including better implementation and translation, and scale-up of effective solutions.
	 There is a significant gap in understanding about the programs, policies and services that will be effective in improving prevention and under a 'prevention system'. In ensuring the priorities are achieved, definition for funding research to inform and accelerate prevention and preventive activities should be mandated.

Overarching theme	Detailed Feedback taken from the submissions - synthesis
	 Greater emphasis on the root causes of preventable diseases and unhealthy ageing. This could include research, which has implications for early intervention and/or preventive intervention in disease progression to reduce the impact of disease on an individual's life and the burden on the health system and on society. Preventative health, disabilities, chronic illness, and comorbidities are currently a critically underfunded and underresearched area where translating knowledge will have proportionally enormous benefits on people's health status and health system sustainability.
Chronic Disease -18	 Focus on chronic diseases research and prevention, including better implementation and translation, early detection and scale-up of effective solutions and better integration of evidence-based improvements in health care and management Lifestyle and health promotion solutions to chronic disease prevention and chronic disease management, including new models of care. Given co-morbidities often coexist, share common risk factors and affect some populations more than others, there is benefit in approaching chronic disease collectively, rather than disease by disease as the current MRFF's Missions do, to better understand common risk factors and interactions between two or more chronic diseases. Funding should include closing the gap in life expectancy for Aboriginal and Torres Strait Islanders attributed to chronic disease. Chronic disease research to also include molecular and biological determinants of early disease states and progression throughout the life course, to inform strategies for early detection, prevention of progression and precision medicine.
Health equity - 18	 Embedding Aboriginal and Torres Strait Islander knowledge, impact measures and perspectives across all priorities can contribute to increased health equity. Support research aimed at meeting Closing the Gap targets, involving support for Aboriginal and Torres Strait Islander leadership and researchers and cross-organisational collaboration. Focus on socio-economic issues promoting health equity. This includes research that addresses the rural versus metropolitan divide and access to services for culturally and linguistically diverse populations. This should include consideration of how we can better apply technologies and other models of care and health service deliveries for the greatest benefit particularly in rural and remote areas. Address inequities to people with a disability, who are more likely to be excluded from participation in the primary healthcare system and in co-design studies due to the requirement to physically attend a consult.

Overarching theme	Detailed Feedback taken from the submissions - synthesis
	 Improve understanding of sex and gender in medical research which will improve the quality and quantity of data that can help describe sex and gender differences and develop an appropriate evidence-based response. There are significant issues for the health system and medical research sector for LGBTIQ peoples. These communities' healthcare needs are often unmet, and, therefore, they experience poorer health outcomes than the general population. The health needs for these populations are challenging to address due to a lack of data collection. This makes service provision planning difficult.
Support for Clinical Researchers — 16	 Sustained and co-ordinated investment in building clinical researcher capacity and capability with specific research translation skills and expertise, including effective consumer and community engagement. Schemes that aim to enhance clinical researcher capacity would benefit from including ways to address and explore opportunities to work in partnership with research institutions to support early and mid-career clinically active researchers to develop long-term collaborations and build research excellence within the health system. Include a stream for Public Health Researcher Capacity and one for Health Services Researcher Capacity, with one of those streams explicitly funding health economists and implementation scientists. Support entry of clinicians and allied health workers into research to support the development of a pipeline of clinician and allied health care researchers and the continuity of those relationships to support the research discovery-translation continuum. Limited support for research within the health system with minimal funded time for clinician engagement in research. This is exacerbated by lack of alignment between federal and state/territory governments, public and private healthcare, and metro and rural/regional healthcare.

Question 7: Suggest options for how the next Priorities could address these critical issues?

Overarching theme	Detailed Feedback taken from the submissions - synthesis
Collaboration – multidisciplinary and multisectoral - 28	 Support collaborations between researchers and other healthcare and health system partners. In particular, collaborations with not-for-profit organisations that are engaging consumers, including with rural and remote communities, to better understand and incorporate specific end-users' health and healthcare needs. Given the critical importance of a more systemic approach to health system design and delivery, prioritisation should be given to funding health system research that enhances multidisciplinary teamwork across the existing priorities.

Overarching theme	Detailed Feedback taken from the submissions - synthesis
Translation of research -21	 Sustained and co-ordinated investment in building clinical researcher capacity and capability with specific research translation skills and expertise. A new priority focused on implementation research is required. Implementation research focuses on the health system, identifying the barriers to adoption of new practices and developing and testing strategies and plans to overcome them. All priorities must aim to translate discoveries into affordable interventions, including health technologies. There is an urgent need to develop and integrate affordable, safe and effective technologies including understanding the drivers of affordability and sustainability. Develop clearly identified research translation plans for each Priority with outputs to include improvements to the healthcare system, reduction of burden of disease, policy change, and/or development of intellectual property. Take a more systematic approach to the translation of research findings to consumers, including by continuing and extending on the innovative work happening under the auspices of translational research groups and centres working in the MRFF primary care research stream.
Chronic Disease - 21	 Consider chronic diseases that are non-fatal in priority setting. Funding of chronic disease research and interventions, from research pipeline to study disease progression and risk, to development of diagnosis, prevention and treatments. Focus on a 'holistic' multi system approach that recognises co-morbidities in chronic diseases. Research needs to consider whole-person prevention and care, and also focus on the quality of life of the patient and desirable patient outcomes. Lifestyle and health promotion solutions to chronic disease prevention and chronic disease management.
Health research workforce – skills, capacity and capability - 19	 Develop and build health research workforce capacity and capability, particularly early and mid-career researchers, and considering gender-equity. Support career pathways for emerging medical research leaders and training a new generation, able to work collaboratively across disciplines, are responsive to community needs and can communicate and translate their research into practice. Support diversity and inclusion with funding for researchers who have had career disruptions due to COVID-19 and working in clinical/ industry settings.

Overarching theme	Detailed Feedback taken from the submissions - synthesis
	 Workforce redesign to embed evidence-based new methods of delivering healthcare that are effective, efficient and patient centred – and that overcome some of the professional silos that are barriers to integrated care. Training researchers in implementation science, translation, comparative effectiveness research and support methodological research in biostatistics and related fields, to increase national capacity for research translation.
Support for Clinical Researchers –- 18	 Sustained and co-ordinated investment in building clinical researcher capacity and capability with specific research translation skills and expertise. Proportion of these schemes to be directed specifically to early and mid-career clinical researchers (across primary, secondary and allied health) support with academic research teams for defined multidisciplinary research support. There is a need to support development of clinician researchers with ongoing funding to ensure capacity to do research. Clinical Fellowships should be retained, with some specifically designated for general practitioners. A
	requirement for a primary care clinician-researcher to be a CI on all MRFF Primary Care grants would further support capacity as well as efficacy.

Question 8: Given the new and significant impact of COVID-19 on health services and health research, how should the new Priorities address COVID-19 related topics?

Overarching theme	Detailed Feedback taken from the submissions - synthesis						
Impact of COVID-19 - 63	 Identify best practices and lessons learned from COVID-19 responses. Examine the impact of changes that have occurred across Australia's health system at both system and local levels. Research into the pathology of acute COVID-19 and the long-term health impacts of COVID-19 as well as vaccination and new therapeutic studies. Focus on impacts of COVID-19 on health services and research: accelerated innovation and development; critical care infrastructure; workforce capacity and resilience; public trust, information and education; national data systems to facilitate health data access in a crisis; population-wide interventions and implementation. Research into behavioural interventions or optimal health system mobilisation/coordination. Build clinician researcher capacity and capability within healthcare to assist the development and adoption of evidence-based solutions to the severe disruption of non-COVID-19 care. 						
Preparedness for emerging health issues/pandemics - 18	 An assessment of research area needs that would better prepare Australia for future pandemics, such as home detection disease testing and monitoring, and telehealth. It is also vital to invest in infectious disease research, drug development and manufacturing capability. There is the need for infrastructure to support community-based trials of treatments for COVID-19 and other future pandemics. Sovereign manufacturing and production capabilities along with national procurement, logistics and rollout capability are also crucial. Community-based, population level interventions and best practice health system responsiveness research are key to reform health and medical systems. Pandemic and disaster preparedness should include investment towards global transmission and infectious disease modelling, animal PC3 facilities, critical care facilities, innovative vaccine and pharmaceutical development and onshore drug and vaccine manufacturing capacity. 						
Chronic disease - 14	 The chronic health impacts of COVID-19 are poorly understood. Research must encompass the entire research pipeline to better understand including cell pathology, the long-term effects on patients, and the impact of vaccination and treatments, and to develop guidelines and policies based on this evidence. Individuals with chronic illness represent a vulnerable group for whom the multiple and long-lasting risks of the pandemic are magnified and require greater support through research. 						

Overarching theme	Detailed Feedback taken from the submissions - synthesis						
	 The rise in chronic disease prevalence contributes to more susceptibility to future health emergencies. The high prevalence chronic diseases have been a major contributor to increased risk of hospitalisation, intubation, and death due to COVID-19, worldwide. Need to focus on the impact of delayed diagnosis of chronic health conditions and the increase in chronic disease management that will now occur in primary care. 						
Collaboration - multidisciplinary and multisectoral - 13	 COVID-19 public health interventions were developed by multidisciplinary multisectoral collaborative teams. These collaborations should be continued and expanded to sectors where there are enormous opportunities for health gain as well as health loss. The not-for-profit health sector was greatly involved in COVID-19 health responses. Such multisectoral relationships should be leveraged in other health responses. Research should consider outcomes to ensure that health informatics involves medical, nursing and allied health professionals in systems development to best utilise technology in health promotion and not just treatment of disease. Aboriginal and Torres Strait Islander community-controlled sectors' successful management of the COVID-19 pandemic is an example of Indigenous leadership, agency, and community empowerment and should be included in future multidisciplinary and multisectoral collaborations. Highlight and actively encourage global collaborations and additionally, require industry engagement and translation plans to involve industry early in research. 						
Health equity - 12	 Incorporate COVID-19 related health research into broader research addressing health inequities. COVID-19 is currently increasing health inequities and funded research addressing COVID-19 should have a clear strategy for addressing these inequities. New models of care should include access to health solutions and services in rural, regional and remote regions and for those with disability. More research is needed to ensure new models are fit for purpose and are patient centric. Health economic perspectives are key to ensure ethical, effective and equitable distribution of health services. More health communication and messaging to address health disparities and health inequities is necessary. Research that capitalises on COVID-19-led innovation in telehealth & digital health should ensure that barriers to uptake are identified and addressed. 						

AMRAB response to themes in public consultation submissions - Strategy

Overarching themes feedback on the Strategy	AMRAB comments
Consumer engagement	 Involving and engaging with consumers and other end-users and stakeholders in research is incorporated into the Strategy's aim in the context of promoting collaborative research. This theme was a consideration in the formulation of Guiding Principles 2 and 4.
Translation of research	 Translation of research into health and economic outcomes, including implementing evidence-based practices, is incorporated into the Strategy's aim and strategic objectives, including recognition of the importance of a workforce with research translation capability (for implementation and impact). This theme was a consideration in the formulation of Principles 3 and 5.
Coordination of effort	 Coordination of effort is incorporated into the Strategy's aim and strategic objectives in the context of promoting collaborative research. There is recognition in the Strategy of MRFF's unique role as a priority-driven investment vehicle that prioritises current and emerging health needs and addresses gaps in translation and health outcomes. This sets it apart from other major health and medical research funders in Australia (e.g. NHMRC) and is briefly outlined in the Context section. This theme was a consideration in the formulation of Guiding Principles 6 and 7.
Clearer linkages	The Strategy has been revised to include strategic objectives that are clearly reflected in the new Priorities. Further
	 details on the Priorities include articulation of the relevance and recommended implementation approach for each priority that will contribute to the key elements of the strategic objectives. Linkages to the Priorities, the initiatives under the MRFF 10-year Investment Plan, and grant opportunities under each initiative, are reinforced through the inclusion of Guiding Principles to support the Strategy which are
	intended to guide the activities and initiatives funded by the MRFF.

Overarching themes	AMRAB comments					
Collaboration - multidisciplinary and multisectoral	 Collaborations across multiple disciplines and sectors, including international partners, and between all partners including from researchers to consumers and end-users, are incorporated in the Strategy's aim and strategic objectives in the context of promoting collaborative research. This theme was a consideration in the formulation of Guiding Principles 4, 6 and 7. 					
 The importance of considering burden of disease is incorporated into the Strategy's aim and strategic object the context of improving health outcomes and will be addressed in the new Priorities (which include prior preventive and public health research and global health and health security). The Strategy provides for the MRFF to focus as a priority-driven investment vehicle on the delivery of health countries as informed by research in preventive health and across the health care system, and also to be responsive to emerging and future health challenges. 						
	The importance of preventive health is incorporated into the Strategy's strategic objectives, and will be					
Preventive Health	implemented under the new Priorities (which include a priority on preventive and public health research).					
Health Research Workforce – skills, capacity and capability	 Having a skilled and sustainable health research workforce is incorporated into the Strategy's aim and strategic objectives, including specific recognition of the need for a workforce with research translation, innovation and commercialisation capability, and fostering gender equity. This theme was a consideration in the formulation of Guiding Principle 6. 					
Health equity	 The importance of health equity is incorporated into the Strategy's aim and strategic objectives in the context of improving lives and in delivering equitable health outcomes through informed research in preventive health and across the health care system. This theme was a consideration in the formulation of Guiding Principles 2, 3 and 4. 					

Overarching themes feedback on the Strategy	AMRAB comments					
reedback on the Strategy						
Support for Clinician	Having a skilled and sustainable health research workforce, including clinical researchers, is incorporated into the					
Researchers	Strategy's aim and strategic objectives, including specific recognition of the importance of a workforce with					
	research translation, innovation and commercialisation capability. This theme was a consideration in the formulation of Guiding Principle 6.					
	This theme was a consideration in the formulation of Guiding Finiciple 6.					
Impact of COVID-19	The importance of responsiveness to emerging and future health challenges (e.g. long-term direct and indirect					
'	health impact of COVID-19) and achieving health equity (in relation to COVID-19 management) is incorporated into					
	the Strategy's aim and strategic objectives. This is in the context of improving lives and delivering equitable health					
	outcomes through informed and collaborative research and translation of outcomes into policy, practice and health technologies/interventions, and in positioning the health and medical research sector and health system to					
	respond to emerging and future health challenges.					
	 Specific elements on delivering outcomes to address the broader impact of COVID-19 were considerations in the 					
	formulation of all Guiding Principles.					
	The importance of responsiveness to emerging and future health challenges (e.g. pandemics) is incorporated into					
Preparedness for emerging	the Strategy's strategic objectives, in the context of positioning the health and medical research sector and the					
health issues/pandemics	health system to respond to these challenges.					
	This theme was a consideration in the formulation of Guiding Principle 7.					
Changin diagon	The importance of prioritising research on preventive health, including prevention of chronic diseases, is					
Chronic disease	incorporated into the Strategy's strategic objectives, and will be addressed in the new Priorities (which include a					
	priority on preventive and public health research).					
Technology investment	The recognition of the need for investment in technologies is incorporated in the Strategy's aim and strategic					
recimology investment	objectives, in the context of investments into transformative and innovative health and medical research that can					
	be translated into health and economic outcomes and respond to emerging challenges (e.g. pandemics).					
	This theme was a consideration in the formulation of Guiding Principles 1, 5 and 7.					

AMRAB response to themes in public consultation submissions - Priorities

Overarching themes feedback on the Priorities	AMRAB comments
Collaboration – multidisciplinary and multisectoral	 Include a new Priority 'Health impacts from environmental factors' for a focus on collaborations to address health challenges resulting from environmental factors, such as bushfires and climate change. Include a new Priority 'Translation and commercialisation', for a focus on collaborations to support research translation, implementation and commercialisation, including to accelerate and advance innovation for better health outcomes by leveraging opportunities from novel or emerging tools and technologies. Expand the scope of the 2020-2022 Priority 'Translational research infrastructure' to 'Research infrastructure and capacity' for a focus on all levels of research collaboration, to support access to expertise, capability and infrastructure to drive new research discoveries and accelerate innovation. Retain 2020-2022 Priority 'Consumer-driven research' for a focus on collaborations with consumers and other endusers, to incorporate priorities, needs, values and experiences to deliver fit-for-purpose outcomes that can be adopted. Retain 2020-2022 Priority 'Primary care research' for a focus on collaborations in research led by healthcare professionals to improve health care and practices, including intersection between primary and secondary care and tertiary care for a more integrated and efficient health care sector. Update the 2020-2022 Priority 'One Health – Antimicrobial resistance' to 'Antimicrobial resistance' for a focus on collaborations across sectors (e.g. human health, animal health, food and agriculture) and internationally to address the health impact of antimicrobial resistance. Retain 2020-2022 Priority 'Global health and health security' for a focus on international collaborations, particularly within the Indo-Pacific region, to address potential and emerging global health threats, including zoonotic diseases and pandemics.
Consumer engagement	• Retain 2020-2022 Priority 'Consumer-driven research' for a focus on collaborations with consumers and other endusers, to incorporate priorities, needs, values and experiences to deliver fit-for-purpose outcomes that can be adopted.

Overarching themes feedback on the Priorities	AMRAB comments
Health research workforce – skills, capacity and capability	 Expand the 2020-2022 Priority 'Clinical researcher capacity' to 'Health and medical researcher capacity and capability' for a focus on supporting and enhancing capacity, including clinical researchers and early to mid-career researchers, fostering gender equity and multidisciplinary engagement, and building research translation, innovation and commercialisation skills.
Translation of research	 Include a new Priority 'Translation and commercialisation for a focus on collaborations to support research translation, implementation, impact and commercialisation, including to accelerate and advance innovation for better health outcomes by leveraging opportunities from novel or emerging tools and technologies. Expand the 2020-2022 Priority 'Translational research infrastructure' to 'Research infrastructure and capacity' for a focus on all levels of research collaborations to support access to expertise, capability and infrastructure to drive new research discoveries and accelerate innovation. Expand the 2020-2022 Priority 'Clinical researcher capacity' to 'Health and medical researcher capacity and capability' for a focus on supporting and enhancing capacity, including clinical researchers and early to mid-career researchers, fostering gender equity and multidisciplinary engagement, and building research translation (including integrating outcomes into health practices and care), innovation and commercialisation skills.
Transparency of MRFF processes	 AMRAB supports clear and transparent processes in relation to Strategy development and Priorities setting. A national consultation has been conducted to provide an opportunity for inputs and transparency in processes. Transparency of the MRFF more broadly is outside of the scope of the Priorities as it relates to the administrative processes of Government.
Preventive Health	 Expand the 2020-2022 Priority 'Public health interventions' to 'Preventive and public health research' to improve public health outcomes through innovative approaches in prevention and public health interventions. This strengthens the focus on reducing the burden of disease associated with chronic diseases, including by addressing modifiable risk factors (e.g. nutritional, behavioural and biomedical) and co-morbidities, and healthy systems. Retain 2020-2022 Priority 'Global health and health security' for a focus on international collaborations, particularly within the Indo-Pacific region, to address potential and emerging global health threats, including zoonotic diseases and pandemics. This includes building capacity for prevention of infectious diseases.

Overarching themes feedback on the Priorities	AMRAB comments
Chronic Disease	 Expand the 2020-2022 Priority 'Public health interventions' to 'Preventive and public health research' to improve public health outcomes through innovative approaches in prevention and public health interventions. This strengthens the focus on reducing the burden of disease associated with chronic diseases, including by addressing modifiable risk factors (e.g. nutritional, behavioural and biomedical) and co-morbidities. Retain 2020-2022 Priority 'Primary care research' for a focus on research led by healthcare professionals to improve health care and practices, including for a more concerted effort in addressing the challenges associated with an increase in chronic diseases.
Health equity	 Expand the 2020-2022 Priority 'Ageing and Aged Care' to 'Priority populations'. This provides a focus on ensuring equitable health outcomes by addressing specific and unique health challenges for priority populations, including older people experiencing diseases of ageing, people with rare or currently untreatable diseases/conditions, people in remote/rural communities, people living with a disability and individuals from culturally and linguistically diverse communities. Expand the 2020-2022 Priority on 'Digital health intelligence' to 'Data, digital health and artificial intelligence' to improve data utilisation nationally for a more integrated and effective health and healthcare system, including leveraging advancement in technologies such as informatics, artificial intelligence, wearables and advanced clinical decision-making tools. This will assist in addressing healthcare access barriers, such as those due to remote locations, languages or a disability. Retain 2020-2022 Priority 'Aboriginal and Torres Strait Islander Health' to improve the health of Aboriginal and Torres Strait Islander leadership and priority-setting in research. Retain 2020-2022 Priority 'Primary care research' for a focus on research led by healthcare professionals to improve health care and practices, including on innovative models of care to address the needs of priority populations and maximise impact. Retain 2020-2022 Priority 'Comparative effectiveness research' to provide a focus on systematic evaluation and the demonstration of the effectiveness and value of therapeutics, devices and health interventions. This will help inform decision-making by healthcare professionals and consumers on the most effective care options, and to

Overarching themes feedback on the Priorities	AMRAB comments						
Support for Clinical Researchers	 Expand 2020-2022 Priority 'Clinical researcher capacity' to 'Health and medical researcher capacity and capability' for a focus on supporting and enhancing capacity, including clinical researchers and early to mid-career researchers, fostering gender equity and multidisciplinary engagement and to build research translation (including integrating outcomes into health practices and care), innovation and commercialisation skills. 						
Impact of COVID-19	 Include a new Priority 'Health impacts from environmental factors' to address emerging and long-term health challenges resulting from environmental factors, such as the indirect impact of the COVID-19 pandemic resulting in delayed health screening, treatment and care for other illnesses. Include a new Priority 'Translation and commercialisation', to support research translation, implementation and commercialisation, including to accelerate and advance innovation to bring about better health outcomes by leveraging opportunities from novel or emerging tools and technologies, such as new COVID-19 vaccines, diagnostics and therapeutics. Expand the 2020-2022 Priority 'Public health interventions' to 'Preventive and public health research' to improve public health outcomes through innovative approaches in prevention and public health interventions, including health systems. This includes addressing public health challenges associated with COVID-19, such as to improve COVID-19 prevention and to better understand, support and develop interventions for potential COVID-19 long-term health impact. Expand the 2020-2022 Priority on 'Digital health intelligence' to 'Data, digital health and artificial intelligence' to 						
	improve data utilisation nationally for a more integrated and effective health and healthcare system, including leveraging advancement in technologies such as informatics, artificial intelligence, wearables and advanced clinical decision-making tools.						
	 Expand the 2020-2022 Priority 'Clinical researcher capacity' to 'Health and medical researcher capacity and capability' for a focus on supporting and enhancing capacity and capability for a sustainable workforce, including clinical researchers and early to mid-career researchers, especially women, to address the pressures on the workforce due to COVID-19, and to build resilience. Retain 2020-2022 Priority 'Global health and health security' for a focus on international collaborations, particularly within the Indo-Pacific region, to address potential and emerging global health threats, including pandemics (e.g. COVID-19 and variants). 						

Overarching themes feedback on the Priorities	AMRAB comments
Preparedness for emerging health issues/pandemics	 Include a new Priority 'Health impacts from environmental factors' to address emerging and long-term health challenges resulting from environmental factors, such as bushfires and climate change. Retain 2020-2022 Priority 'Global health and health security' for a focus on international collaborations, particularly within the Indo-Pacific region, to address potential and emerging global health threats, including zoonotic diseases and pandemics. This includes building capacity for preparedness, prevention, response, eradication and/or management activities.

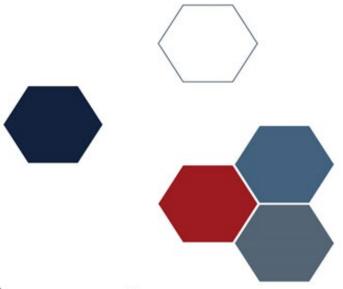
Appendix A: Most frequent themes

Most Frequent Themes	Strategy Q1	Strategy Q2	Strategy Q3	Strategy Q4	Priorities Q1	Priorities Q2	Priorities Q3	Priorities Q4
1	Consumer engagement 41	Preventive Health 31	Collaboration - multidisciplinary and multisectoral 39	Impact of COVID- 19 51	Collaboration - multidisciplinary and multisectoral 32	Translation of research 30	Collaboration - multidisciplinary and multisectoral 28	Impact of COVID- 19 63
2	Translation of research 28	Health Research Workforce – skills, capacity and capability 28	Health Research Workforce – skills, capacity and capability 26	Preparedness for emerging health issues/pandemics 26	Consumer engagement 26	Collaboration - multidisciplinary and multisectoral 22	Translation of research 21	Preparedness for emerging health issues/pandemics 18
3	Clearer linkages between Strategy, Priorities and 10-year Plan 27	Translation of research 24	Consumer engagement 24	Health Research Workforce – skills, capacity and capability 16	Health Research Workforce – skills, capacity and capability 23	Health Research Workforce – skills, capacity and capability 22	Chronic disease 21	Chronic disease 14
4	Coordination of effort 27	Collaboration - multidisciplinary and multisectoral 22	Translation of research 20	Chronic disease 13	Translation of research 21	Preventive Health 20	Health Research Workforce – skills, capacity and capability 19	Collaboration - multidisciplinary and multisectoral 13
5	Burden of disease 25	Health equity 19	Preventive Health 19	Technology investment 12	Transparency of MRFF processes 17	Chronic disease 18	Clinician Researchers – support for 18	Health equity 12
6	Collaboration - multidisciplinary and multisectoral 25	Early to mid- career researchers – support for 17	Clinician Researchers – support for 19	Infrastructure investment 11	Clinician Researchers – support for 16	Health equity 18	Consumer engagement 17	Health Research Workforce – skills, capacity and capability 11
7	Health Research Workforce – skills, capacity and capability 17	Basic discovery research – funding for 16	Health equity 18	Collaboration - multidisciplinary and multisectoral 10	Infrastructure investment 15	Clinician Researchers – support for 16	Preventive Health 16	Broad research scope for impact of COVID-19 in community 10

Most Frequent Themes	Strategy Q1	Strategy Q2	Strategy Q3	Strategy Q4	Priorities Q1	Priorities Q2	Priorities Q3	Priorities Q4
8	Health equity 16	Coordination of effort 15	Early to mid- career researchers – support for 16	Clinician Researchers – support for 9	Chronic disease	Consumer engagement 10	Specific research paradigms – funding for 15	Data and data infrastructure 9
9	Preventive Health 15	Clinician Researchers – support for 15	Coordination of effort 16	Coordination of effort 9	Data and data infrastructure 13	Data and data infrastructure 10	Data and data infrastructure 13	Technology investment 9
10	Primary Healthcare 15	Chronic disease 14	Data and data infrastructure 15 Transparency of MRFF process 15	Preventive Health b8 Models of care - support for new and evidence- based 8	Clearer linkages between Strategy, Priorities and 10-year Plan 13	Health impact from climate/environmental factors 10	Health equity 12	Models of care – support for new and evidence- based 9

Appendix B: Australian Medical Research and Innovation Strategy Roundtable Discussion Summary





Medical Research Future Fund

Australian Medical Research and Innovation Strategy Roundtable
30 September 2021
Discussion Summary

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 Attendees	
Discussion	
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Introduction

The <u>Medical Research Future Fund Act 2015</u> (the MRFF Act) establishes the Australian Medical Research Advisory Board (AMRAB) to:

- determine a strategy for ensuring that a coherent and consistent approach is adopted in providing financial assistance for medical research and medical innovation through the Medical Research Future Fund (MRFF)
- determine priorities (the Priorities) for providing financial assistance under the MRFF for medical research and medical innovation that are consistent with the Strategy that is in force
- provide a transparent process for consulting with experts in medical research and consumers before determining a Strategy or Priorities.

The inaugural Strategy covers the period 2016-2021 and a new Strategy is required to be tabled in Parliament on or before 8 November 2021.

The consultation process undertaken in determining the new Strategy and Priorities provides a platform to discuss:

- whether the Strategy and Priorities could be improved to better meet the requirements set out in the MRFF Act
- the current and future critical issues and factors a new Strategy and Priorities should address to guide MRFF investments in health and medical research
- options to address these critical issues and factors
- how the Strategies and Priorities can account for the significant impact of COVID-19 on health services and the research sector.

As part of the consultation process, AMRAB held an Australian Medical Research and Innovation Strategy Roundtable on 30 September 2021 that engaged with a range of stakeholders from across the medical research and medical innovation sector (see Attendees). This summary provides a high-level overview of discussions from the roundtable, by providing insight on how roundtable attendees view the overarching role of the MRFF within the broader health and medical research landscape, and to identify opportunities and challenges. These views will be used to complement the written submissions through an online consultation hub to inform AMRAB on developing the new Strategy and as part of refreshing the Priorities.

In providing a summary of the roundtable this document reflects the discussion, however does not represent the endorsed views of AMRAB or the Department of Health.

Purpose

The purpose of the roundtable was to encourage discussion and reflection on shaping the MRFF's future strategic directions. Rather than focusing on individual specific priorities, the roundtable provided a dialogue platform to inform the shaping of the framework that will contextualise the MRFF within the health and medical research system, and the broader health, social and economic system, as well as how that framework will be used to identify suggested priority areas for funding. It was also an opportunity to reflect on the MRFF's current operating context, nationally and internationally, and the challenges and opportunities this creates, and propose ways forward.

Attendees

Name	Representing Organisation	
Professor Ian Frazer AC (Chair)	Australian Medical Research Advisory Board	
Professor Caroline Homer AO (Deputy Chair)		
Professor Denise Doolan		
Professor Tom Calma AO		
Mr Yasser El-Ansary		
Professor Douglas Hilton AO		
Professor Anne Kelso AO		
Ms Imelda Lynch		
Invited organisations/groups		
Academy of the Social Sciences in Australia		
Association of Australian Medical Research Institutes		
AusBiotech		
Australian Academy of Health and Medical Sciences		
Australian Research Council		
Australian Technology Network of Universities		
Commonwealth Scientific and Industrial Research Organisation		
Consumers Health Forum of Australia (3 representatives)		
Innovative Research Universities		
Lowitja Institute (2 representatives)		
Medical Services Advisory Committee		
Medical Technology Association of Australia		
National First Nations Research Network (2 representatives)		
National Health and Medical Research Council		
Health Chief Executives Forum delegation (2 representatives)		
Office of the Chief Scientist		
Pharmaceutical Benefits Advisory Committee		
Regional Universities Network		
Research Australia		
The Group of Eight		

Discussion

To facilitate discussion, attendees were allocated to one of six breakout groups to enable more efficient discussion on three broad topics:

- 1. MRFF Role and Complementarity
- 2. Translating Research into Impact
- 3. Challenges and Opportunities

Attendees were asked to consider the following questions under each theme.

Theme 1: MRFF Role and Complementarity

Consider the strategic place and role of the MRFF as part of a broader inter-connected system supporting medical research and medical innovation in Australia.

Considerations:

- The object of the MRFF is to 'improve the health and wellbeing of Australians.' The MRFF complements other Government, not for profit and industry support for research.
- What unique role/s can the MRFF play within this system?
- How could this role/ these roles be articulated in the 2021-26 Strategy?
- In 5 years' time, how will we know that the MRFF has fulfilled its unique role/s and made its most effective contribution within this interconnected system?

Theme 2: Translating Research into Impact

Consider the role of the MRFF in supporting the translation of research into impact by generating new knowledge, supporting the adoption of evidence-based health interventions, and promoting the development and implementation of new interventions.

Considerations:

- The object of the MRFF is to 'improve the health and wellbeing of Australians.'
- The current Strategy has identified 5 impact measures for assessing the effectiveness of the MRFF; they focus on the translation of research to impact.
- What is the MRFF's unique role in supporting the translation of research into impact?
- How could this role be articulated in the 2021-26 Strategy?
- In five years' time, how will we know that the MRFF has been successful in translating research into impact?

Theme 3: Challenges and Opportunities

Consider the MRFF's current operating context, nationally and internationally, and the challenges and opportunities this poses.

Considerations:

- The MRFF operates within the context of the health system as a contributor to the broader social and economic system.
- Health and medical research is an international endeavour, and Australian researchers are part a globally connected system.
- What are the key challenges (e.g. COVID-19) and opportunities for the MRFF within these interconnected systems, particularly for consumers and the community?
- How can these be articulated in the 2021-26 Strategy?

Summary of discussion

Improve coordination so that the MRFF is better able to complement and leverage other partners within the broader health and medical research system, and across the research and translation pipeline

The MRFF's purpose is to support health and medical research and medical innovation, with a strong focus on translating research outcomes, in order to deliver health and economic benefits and improve the health and wellbeing of all Australians. The MRFF has a unique role as a funder of priority-led research thus complementing the NHMRC, which mainly funds investigator-led research.

The MRFF can adopt a stronger role in driving research coordination and alignment. As the MRFF continues to mature, there is an opportunity to better define the overarching role of the MRFF in complementing and enhancing support from other partners within the broader health and medical research system. To achieve the greatest impact from alignment, there should be coordination at the national level and across the whole spectrum of the research system, from the research discovery phase to translation of research outcomes to clinical and preventative practices. This includes an integrated and structured approach, such as through roundtables, to bring together, coordinate and collaborate with other partners within the research and commercialisation landscape, from the NHMRC, other Commonwealth and state/territory agencies, to industry partners, the private healthcare industry, and philanthropic groups etc., to enable and better leverage co-investments from partners.

To truly maximise the potential for translational research to impact on health outcomes there needs to be an improvement in developing and encouraging collaboration between researchers, health system users and beneficiaries of research outcomes, including investors, consumers, those involved in health service delivery (public and private) as well as industry. The MRFF has a role to play in supporting collaboration, with a particular focus on co-design and co-creation, from end-to-end of the research to translation pipeline. Co-design and co-creation present an important opportunity to think about the end-product or therapy and its users, and the degree to which a research outcome is of direct benefit to end-users and can be translated into new treatment options and health interventions. This could also include early involvement of the relevant regulator(s) to ensure research design and generation of outputs meet the required regulatory requirements.

From a multisectoral perspective, stronger co-ordination and alignment across and between the public and private ecosystems is required, which may involve aligning jurisdictional policies and priorities, and closer involvement of state and territory agencies in the research co-design and co-funding opportunities. There also needs to be greater consideration of matters such as Aboriginal and Torres Strait Islander priorities, and the needs of individuals with a disability and those from culturally and linguistically diverse communities. In the private sphere, engaging the commercialisation ecosystem is key. Greater alignment can be achieved through sponsored projects and incorporating measures that facilitate this alignment in proposals. The result of improved co-ordination will be technologies and interventions embedded into practice, adopted by the community and greater translational capability and capacity in the research community. Co-ordination will also reduce duplication and harness the benefits of scale.

Given the competitive environment of research and the ongoing need to build connections between and within institutions, it will be important for the MRFF to support collaboration between researchers, particularly from different disciplines, including potentially, outside of the

health sector. The MRFF may need to explore how to further incentivise collaboration, focussing on a merit-based system that promotes national, multisectoral partnerships.

Improve health system efficiency and effectiveness for all

The use of MRFF funding to ensure greatest value to the Australian public is crucial given the ongoing significant health expenditures by the community through government. It is vital to ensure sustainability by improving health system efficiency and effectiveness. This includes research that drives more efficiencies in the health system, meets the needs of diverse groups and addresses inequalities and gaps (such as those relevant to Aboriginal and Torres Strait Islander people, people with a disability and other priority populations). It also requires that all people in Australia can access the best available healthcare and benefit from better health outcomes, irrespective of their circumstances. This could involve incentivising partnerships with industry, state and territory governments and others to support research into rare health and medical conditions that otherwise may not be seen as commercially viable by industry or supporting research into the problems of rural health care delivery or into improved management of common chronic conditions.

Consideration should also include how the system can better embed strategies for ensuring that design of research supports research translation and delivery of practical health outcomes and is fit-for-purpose to address specific needs. For example, support could be provided for engaging with and incentivising equitable participation across populations in research and clinical trials.

The MRFF should also strengthen its role in connecting the journey from research inception to the practical implementation of benefits for the end-user. Consumer involvement is a major key to this. Consumers are the ultimate users and beneficiaries of health and medical research. To improve the success of translation into practice, consumers should be involved in all aspects of research and this can be achieved through research teams effectively partnering with consumers at all stages of design through to implementation and impact.

Design initiatives so impact is measured and look for opportunities to adopt a broader ecological approach

The MRFF's potential impacts on health and the economy have not yet been realised. Evaluation of impact will be key to determining the success of the MRFF, and clear measurable indicators, including interim lead and lag indicators, should be built into implementation strategies for MRFF funding initiatives. This should include measures to inform the review of the Priorities. An important challenge for the MRFF going forward will be knowing if it has made an impact on the translation of research into clinical practice.

The MRFF is unique in that it offers a mechanism that can provide a bridge across many different components of the research ecosystem. For example, it can be seen as creating a bridge between capacity building and research, between translation and commercialisation, between prevention and care, treatment or cure, and between the Commonwealth and other jurisdictions. Considering these multiple facets of MRFF operation, particular emphasis needs to be placed on clearly defining impact and also on ensuring that the right people are involved in research to optimise the likelihood of impact.

To better realise impact, an ecological and multisectoral approach should be adopted to address broader social issues. Wider engagement needs to address inequities in the health system to maximise the impact of research on the health and wellbeing of all Australians.

Adopting an ecological lens considers environmental and social contexts of issues and not just the biomedical. Impact goes beyond people's health as demonstrated by the COVID-19

pandemic, which has changed how we live and work, and how we view the future of our society. Delivering better health is integral to every part of society. Broader flow-on impacts, such as on food security and the environment, should be considered when designing impact measures.

Build, support and grow the workforce

A strong and thriving health and medical research system is dependent on having a suitably skilled workforce, that can be sustained across the whole spectrum of the system. This includes specialised skills from one end of the research pipeline to the other; from those required for research discoveries to research translation and commercialisation.

There is a need to enhance support for early- to mid-career researchers within the health and medical research system, and this has been exacerbated by the COVID-19 pandemic due to a combination of an inability to retain local talent and to bring in new overseas talent. Ensuring there is a healthy talent pool of early- to mid-career researchers is vital for ensuring succession planning and the long-term future sustainability and capability of the research sector. In addition, there is also a need for greater consideration of promoting gender equity in the research workforce. Difficulty in retaining women in the science and research workforce especially has been a long-standing challenge. These are important considerations for the entire research ecosystem.

Strengthen international collaboration and global impact

Australian health and medical research is recognised as world-class. There is opportunity for the sector to identify where Australia can best contribute its expertise towards global health impacts, by engaging with international partners and especially regional neighbours to understand and address common health priorities. As evidenced by the COVID-19 pandemic, the threat from infectious diseases and globalisation does not recognise international borders. Biosecurity and improving the overall health status within the region are of national interests to Australia, which also contribute to global health.

The recent COVID-19 pandemic has also hampered participation in international research, from building knowledge and capability, through collaborations, to access to international funding, with potential long-term impact. There is an opportunity for the MRFF to work in partnership with the NHMRC to ensure that the sector can work strategically to continue to maintain and grow its international standing and participation.

Consider emerging health issues and long-term future health impact

There is an opportunity for the MRFF to consider future long-term health needs. For example, recent extreme climate challenges (e.g. bush fires) as well as the COVID-19 pandemic are recognised to have longer-term direct and indirect health impacts (including on mental health) that will need to be addressed.

There should also be an emphasis on health prevention and ways to assess and reduce ineffective and/or harmful health interventions and minimise waste in the health system. There is also an opportunity to consider how other parts of the broader health and medical research system could have a positive impact on the healthcare system that are not usually funded by traditional methods.

Invest in high-risk, high-return research

The MRFF has an opportunity to focus more on high-risk research and innovation that has potential for high returns. This especially applies to novel or emerging technologies, which have potential to significantly transform the sector and produce health and economic benefits, but

often have long lead research and development time requiring significant investments with a high risk of failure rate. This can be facilitated by looking towards under-valued areas that require further research. This could include strengthening the research pipeline by focussing on research with high potential knowledge impact but with no direct or immediate commercial applications.