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Health Research Strategy
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New Zealand Health Research Strategy

Dear Ministers

The New Zealand Medical Association (NZMA) wishes to provide feedback on the New Zealand Health Research Strategy Public Discussion Document.¹ The NZMA is New Zealand's largest medical organisation, with more than 5,500 members from all areas of medicine. The NZMA aims to provide leadership of the medical profession, and to promote professional unity and values, and the health of all New Zealanders. Our submission has been informed by feedback from our Advisory Councils and Board.

General comments

1. We support the development of New Zealand's first ever health research strategy. We believe that its value lies within its strategic direction and priorities. It is commendable that the document acknowledges issues such as "how to achieve equity of health outcomes" and "the need for a fair and responsive health system that reduces disparities in health outcomes for key groups, including Māori, Pacific peoples, and disabled people". We also welcome recognition of "unlocking the factors determining health and wellbeing for New Zealanders now and into the future" as an example of a strategic priority. It is well recognised that a society's health status is closely linked to various social determinants. As most of the social determinants of health lie outside the healthcare sector, the NZMA believes that a whole-of-government approach is required to eliminate inequities in health.²
2. We note that the document identifies health research as including "biomedical sciences, public health, clinical and health services research". While research in all these areas is essential, some of the greatest improvements to health outcomes will arise from cross-sectoral research across a range of disciplines. Although the document refers to "meaningful collaborations across the life and social

¹ Minister of Science and Innovation and Minister of Health. 2016. New Zealand Health Research Strategy: Public discussion document. Wellington: Ministry of Health. May 2016. Available from <http://www.health.govt.nz/system/files/documents/publications/nz-health-research-strategy-discussion-document-may16.pdf>

² NZMA. Health Equity Position Statement 2011. Available from http://www.nzma.org.nz/data/assets/pdf_file/0016/1456/Health-equity-2011.pdf



sciences and with engineering” we believe that a wider research framework is needed. We outline the form this could take in paragraph 14.

3. There is good data to show that patients treated in clinical trials have better outcomes. At present, it can be very difficult for clinicians to be able to offer patients the chance to take part in international investigator-led trials as many DHBs charge large amounts for overheads, data collation, pharmacy fees, start up fees, etc. While these fees are an appropriate revenue source for industry-led trials, this should not be the case for investigator-led trials, as the latter trials do not attract industry funding. Nevertheless, investigator-led trials contribute a good deal towards patient care by ensuring patients receive internationally recognised, up-to-date treatment protocols. An example of the difference that can be achieved by joining an investigator-led international trials group is the improvement in the 5 year survival for acute myeloid leukaemia from 2% to 42% within 7 years of joining the UK MRC trials group.

4. The benefit of clinical trials to patient care is recognised by, for example, the Ministry of Health Cancer Tumour Streams and the Ministry of Health Provision of Services for Adolescent and Young Adults with Cancer, both of which state that every patient should be offered treatment in a clinical trial. However, this should be the aim for all patients, not just cancer patients. We submit that the health research strategy should specifically support clinical trials which should be regarded as a part of the core business of DHBs and funded accordingly. We suggest that research be specifically embedded as a goal and KPI for DHBs; this should be a separate function within section 23 (Functions of DHBs) of the New Zealand Public Health and Disability Act 2000 (the Act).³ This would be similar to research being a legislative function of PHARMAC, as another Crown agent, under section 48 of the Act.⁴ The number of patients being offered clinical trials should be monitored as a KPI for DHBs.

5. Beyond directly improving health outcomes, the opportunity to participate in clinical research is a significant workforce issue for senior clinicians, both for professional development and job satisfaction. We draw attention to the following recommendations from a report commissioned by the Health Select Committee into improving the environment in New Zealand to support innovation through clinical trials:⁵

- *Specialist clinicians involved in clinical trials have increased education and the opportunity to have a global presence in their specialist field.*
- *Top clinicians seek to engage in clinical research and are likely to stay within New Zealand if offered the opportunity to conduct clinical research as an integral part of their employment.*
- *Junior doctors who are involved in clinical trials often go on to be leaders in their field of medicine.*
- *Recognising clinical trial activity would assist in retaining New Zealand clinical researchers and scientists.*
- *A culture of cutting edge medicine and innovative practice allows New Zealand to retain the most able and creative doctors.*
- *Clinical trials are important for the retention and recruitment of senior clinicians.*

We suggest, therefore, that the strategy needs to explicitly recognise the important links between health research and the workforce.

6. We believe the strategy should give greater emphasis to health services research. This includes the delivery of technology to people effectively and equitably, and deals with the practicalities of implementing the science.⁶ The NZMA recognises the importance of clinical academic career pathways

³ <http://www.legislation.govt.nz/act/public/2000/0091/latest/DLM80810.html>

⁴ PHARMAC is required “to engage as it sees fit, but within its operational budget, in research to meet the objectives ... [to secure for eligible people... the best health outcomes that are reasonable achievable...] set out in section 47(a) of the Act.

⁵ http://www.parliament.nz/resource/en-nz/49DBSCH_SCR5154_1/19f143ece9bbafc1f5970397e5d92a582e003faa

⁶ Lohr KN, Steinwachs DM. Health services research: an evolving definition of the field. Health Serv Res 2002;37(1):15-17. Available from <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1430351/>

in medicine,⁷ and the need for research to inform policy and funding. We have also called for operational research into health systems, where such research materially contributes to setting healthcare priorities.⁸ We discuss this under the section ‘More about health research’ on page 15 and we also suggest it could be incorporated into a strategic priority.

7. We submit that the strategy should make a clear statement on the importance of disease-specific assessment and management guidelines. Such research needs to be integrated with the actual development of those guidelines.

8. We are concerned at the seemingly undue emphasis the document places on the potential commercial benefits of health research, while failing to acknowledge the possible conflicts of interest between commercial and public health priorities. We elaborate on these conflicts in our specific responses below. We believe the strategy should also support the basic sciences. This type of research may have no direct commercial application, yet research in the basic sciences often results in many of the most profound advances in knowledge. We are also concerned that the document is totally silent on the health challenges of climate change.⁹ It is incongruous that a health strategy that sets strategic priorities for the next 10 years does not make a single mention of what has been described in the *Lancet* as “the biggest global health threat of the 21st century”.¹⁰ The same journal has also reported that tackling climate change could be the greatest global health opportunity of the 21st century.¹¹ This omission appears to reflect the document’s general failure to take into account meaningfully the broader contextual factors affecting health and its determinants. We elaborate on some of these in specific responses below.

Responses to specific questions

Question 1. Does the proposed vision capture what you see as the desirable future state for health research in New Zealand by 2026?

9. We support the high-level vision of “a more dynamic and world-leading health research and innovation system that markedly improves the health and social and economic wellbeing of all New Zealanders”. We suggest that the concept of sustainability be introduced into this high-level vision and be part of any health research agenda for the 21st century, as it is technically possible to improve health and wellbeing of today’s New Zealanders using processes that are unsustainable and unjust to future generations.

10. We are concerned about some of the bullet points under the high-level vision. We note the point about “strong connections to the biological economy, the manufacturing sector and food industries”. We would be worried if these “strong connections” compromised the independence of health research.¹²

11. We also submit that the document should address concerns about the constraints commercial relationships place on the behaviours of many scientists and researchers. This is particularly important given the document’s recommendation that “...secondments to industry are critical and could receive particular attention”. We note that a survey by the New Zealand Association of Scientists found that over

⁷ NZMA. Clinical academic career pathways in medicine Position Statement. June 2015. Available from https://www.nzma.org.nz/_data/assets/pdf_file/0003/41979/Clinical-academic-career-pathways-in-medicine-2015.pdf

⁸ Ibid

⁹ NZMA. Health and Climate Change Position Statement. August 2015. Available from http://www.nzma.org.nz/_data/assets/pdf_file/0010/16984/NZMA-Position-Statement-on-Health-and-Climate-Change-FINAL_August-2015.pdf

¹⁰ Costello A, et al for the Lancet and University College London Institute for Global Health Commission. Managing the health effects of climate change. *Lancet*; 2009 May 16;373:1969–1733. Available from <http://www.ucl.ac.uk/global-health/project-pages/lancet1/ucl-lancet-climate-change.pdf>

¹¹ <http://www.thelancet.com/commissions/climate-change-2015>

¹² Kearns CE, et al. Sugar industry influence on the scientific agenda of the National Institute of Dental Research's 1971 National Caries Program: a historical analysis of internal documents. *PLoS Med*. 2015 Mar 10;12(3):e1001798. Available from <http://journals.plos.org/plosmedicine/article?id=10.1371/journal.pmed.1001798>

150 scientists reported “yes” to the question: “*Have you ever been prevented from making a public comment on a controversial issue by your management’s policy, or by fear of losing research funding?*”¹³ One scientist noted in response: “How as a CRI scientist can I ever speak out against an industry that my CRI services? I just cannot”. We contend that the rights of researchers—both to publish and to speak out on their research findings and related issues—should be explicitly enshrined in this document, consistent with other sections that call for complete transparency at all stages of the research process.

12. With respect to the bullet point highlighting the need for a “stronger health-related commercial sector with growing high value exports”, the contribution of technology-oriented research towards health equity and the “health, social and economic wellbeing of all New Zealanders” may be relatively modest. Technological innovation has much potential to improve healthcare, but we would be concerned if a health research strategy was oriented too heavily towards the development of new health technologies, when greater health gains will be through the equitable uptake of existing technologies rather than the uneven spread of new. According to Treasury, income growth and technological change are the greatest drivers of healthcare cost, with the latter providing potentially marginal gain in certain circumstances.¹⁴

Question 2. Are there additional aspects that you think should be included in the vision?

13. Sustainability, which encompasses major global health threats like climate change¹⁵ and antimicrobial resistance, should be included in the vision. There should be a point about improved engagement between health researchers and the public. This is important to both improve health literacy and counter misinformation.¹⁶ We also suggest that the vision needs to emphasise the social, economic and environmental determinants of health, along with the structural policy drivers that influence them.

Question 3. Does the proposed mission capture key contributions and roles that are needed to achieve this vision?

14. The major threats to health and wellbeing to be faced by New Zealanders in the 21st century will be caused by the interaction between complex human and environmental systems at a global level. As such, we suggest the mission embraces a planetary health research agenda along the lines proposed by the Lancet Commission on Planetary Health.¹⁷ This would foster transdisciplinary research initiatives focusing on sustainable and equitable economic development, and improvement in health and health equity. It should entail broad collaboration between research in health and in the physical and social sciences, including economics. It should also acknowledge the global interconnectedness of the threats and challenges that are faced.

Question 4. Do these proposed guiding principles clearly state the operating principles and values that are needed to achieve change over the next 10 years?

15. We strongly agree with the need to “break down interdisciplinary barriers”. However, we contend this should address planetary health challenges, as specified by the Lancet Commission on Planetary Health:¹⁸

Planetary health as a field straddling many uncoordinated disciplines demands investment and the development of a culture of interdisciplinary research. The health research community should forge links with the full range of relevant disciplines in the natural, physical, and social sciences to understand complex systems and assess potential policy solutions.

¹³ <http://www.scientists.org.nz/blog/2014/survey-on-the-proposed-code-of-public-engagement>

¹⁴ <http://www.treasury.govt.nz/publications/research-policy/wp/2010/10-01/23.htm>

¹⁵ NZMA. Health and Climate Change Position Statement. August 2015. Available from http://www.nzma.org.nz/_data/assets/pdf_file/0010/16984/NZMA-Position-Statement-on-Health-and-Climate-Change-FINAL_August-2015.pdf

¹⁶ Oreskes N & Conway E. Merchants of Doubt. See <http://www.merchantsofdoubt.org/index.html>

¹⁷ <http://www.thelancet.com/commissions/planetary-health>

¹⁸ Ibid

16. While “monitoring activities and outputs” is essential, the criteria by which these are evaluated are of key importance. We contend that the primary criteria should relate to the potential of research findings to sustainably improve health and health equity, rather than have short-term commercial and economic benefits defined solely in financial terms.

Question 5. Do you think additional guiding principles are needed?

17. We believe that implementation of the UN Sustainable Development Goals (SDGs)¹⁹ should also be acknowledged as a guiding principle and provide an overarching framework for a 21st century health research agenda.

Question 6. Taken together do you think the proposed vision, mission and guiding principles will set the framework for a more cohesive and connected health research and innovation system?

18. We consider the proposed vision, mission and guiding principles would set such a framework. However, we have already drawn attention to our concerns that the framework itself does not adequately reflect the challenges the world is facing.

Question 7. What do you think should be the focus of the strategic priorities in the health research strategy?

19. We submit that the focus of the strategic priorities should be the research most likely to sustainably benefit the “health, social and economic wellbeing of all New Zealanders”.

Question 8. What do you think of the example strategic priorities?

20. We are concerned about strategic priority example 1 (improving investment settings and processes for health research). The unduly strong emphasis on health research as a means to yield economic benefits is likely to skew the research agenda and divert funding priorities away from the overall vision of improving the “health, social and economic wellbeing of all New Zealanders”. We refer back to our comments under question 1 for further details of our concerns.

21. We strongly support strategic priority example 2 (unlocking the factors determining health and wellbeing for New Zealanders now and into the future). When considering gaps in knowledge about health and wellbeing, we contend that a lot more work needs to be done on evaluating the impact of economic inequality on various measures of health and wellbeing in the New Zealand setting. Research making comparisons between OECD countries and between US states suggest that levels of income inequality are significantly correlated with a diverse range of adverse health and social outcomes (ranging from levels of violence and teenage pregnancy rates through to rates of mental illness and life expectancy). As such, we recommend that the relative importance of income inequality and measures such as per capita GDP should be evaluated more closely. The overarching focus should be on current and future generations of New Zealanders “living well and staying well”. We suggest that health services research be more prominently incorporated into this strategic priority.

22. We strongly support strategic priority example 3 (improving connections across the health research and innovation system). We suggest the focus should be on the need for transdisciplinary collaboration. While commercialisation of health technologies and innovations can certainly be a positive goal, this should not be prioritised over research aiming to improve health equity.

23. We strongly support strategic priority example 4 (enhancing the uptake of health research across the social and health sectors). We believe that Government, in particular, should be responsive to new evidence gleaned from health research showing ways to “improve the health, social and economic wellbeing of all New Zealanders”. This should begin with a stocktake of currently available health research findings that point to health and social policies yet to be implemented.

¹⁹ <http://www.un.org/sustainabledevelopment/sustainable-development-goals/>

Question 9. What specific actions could help us achieve the strategic priorities you have identified?

24. We submit that there is an urgent need for greater statistical literacy²⁰ across society,²¹ and particularly among policy and decision makers in the health sector.²² For health decision-makers, such numerical and statistical literacy means the ability to interpret the quality and content of research data/findings—including their limitations—both when deciding which studies to commission, and interpreting study results. Lessons should be drawn from past experience, such as the failure to screen donated blood products for Hepatitis C in the 1990s, where the official inquiry into this matter attributed the failure partly to the fact that “the concepts of sensitivity and specificity of tests were not well understood [by officials]” and went on to recommend that “steps should be taken to ensure appropriate medical and technical input into health policy”.²³ This also includes understanding the differences between high quality RCTs and the use of administrative databases, and being aware of the pitfalls of the latter.

25. Another suggestion is to provide a dedicated fund to support New Zealand health researchers contributing toward international interdisciplinary collaborations focused on sustainable development.

Question 10. How could health research best support the directions of the New Zealand Health Strategy Future Direction?

26. In the first instance, we refer to our feedback on the deficiencies in the New Zealand Health Strategy.²⁴ We believe that the Health Strategy needs to better acknowledge the structural drivers of health inequity and some key health challenges of the 21st century. The health research strategy should also better acknowledge these drivers and challenges.

Question 11. Where do the challenges and opportunities lie for health research in New Zealand?

27. New Zealand has historically been considered a global leader in health, social and environmental issues. We also have a world-class public health system. In combining these, visible leadership by New Zealand health researchers on the key global health issues of our time may further enhance our international reputation as a leader and a responsible global citizen. In the near term, improving our reputation in this way may benefit our export and tourism sectors. We agree that a number of factors provide major opportunities for health research in New Zealand. These include rich health data, particularly the opportunity to pull together large and disparate national datasets linked at the level of the individual patient.

Question 12. How can we build a more cohesive and connected system?

28. We support many of the document’s suggestions to build a more cohesive and connected system. These include ensuring that funding arrangements support collaborative research.

²⁰ United Nations Economic Commission for Europe. Making Data Meaningful Part 4: A guide to improving statistical literacy. Geneva 2012. Available from

http://www.unece.org/fileadmin/DAM/stats/documents/writing/Making_Data_Meaningful_Part_4_for_Web.pdf

²¹ How good are we with numbers? Bandolier Journal. 2006. Available from <http://www.medicine.ox.ac.uk/bandolier/band144/b144-2.html>

²² NZMA. Response to the discussion paper ‘Better Data—the benefits to the profession and the public’: New Zealand Medical Association submission to the Medical Council of New Zealand, 8 June 2015. Available from https://www.nzma.org.nz/_data/assets/pdf_file/0007/42928/NZMA-Submission-on-MCNZ-discussion-document-Better-Data-the-benefits-to-the-profession-and-the-public.pdf

²³ Department of Health. Inquiry into Matters Relating to the Safety of Blood Products in New Zealand. December 1992. Available from [http://www.moh.govt.nz/notebook/nbbooks.nsf/0/5F11639F6E252BB14C2565D700188516/\\$file/Inquiry%20into%20the%20safety%20of%20blood%20products%20in%20NZ.pdf](http://www.moh.govt.nz/notebook/nbbooks.nsf/0/5F11639F6E252BB14C2565D700188516/$file/Inquiry%20into%20the%20safety%20of%20blood%20products%20in%20NZ.pdf)

²⁴ NZMA. Submission on and update of the New Zealand Health Strategy. November 2015. Available from http://www.nzma.org.nz/_data/assets/pdf_file/0020/46154/sub-Update-of-the-NZ-Health-Strategy.pdf

Question 13. In what areas could health research in New Zealand make the greatest difference to the health and wellbeing of all New Zealanders over the short term and into the longer term?

29. It is our view that the greatest improvements to health and wellbeing in both the short and long term would be achieved by addressing the structural determinants of health inequities.²⁵ These include, but are not limited to, factors such as: material deprivation in the form of inadequate housing and nutrition; socially corrosive economic inequalities (that in turn trigger a range of adverse health and social consequences); ethnic disparities in health; and regulation of harmful and potentially harmful commodities such as alcohol, tobacco, unhealthy foods and fossil fuels.

Question 14. How can we ensure health research generates knowledge and understanding that can help address the health needs of all New Zealanders?

30. The tension between commercial and public health objectives is unacknowledged in the consultation document, yet is extremely relevant when defining a health research strategy. In some instances, commercial objectives can be detrimental to addressing the health needs of all New Zealanders. The strategy needs to acknowledge this tension and prioritise research that addresses the health needs of all New Zealanders.

Question 15. How can we get more excellent science and high impact research?

31. We believe it is important to incentivise and nurture an academic system that rewards and values the *quality* of research output rather than the quantity. This should include ‘big picture’ thinking and systems-based research oriented toward addressing the immediate wider health challenges of the 21st century. We also consider it important to advance research on risk management and decision-making under conditions of uncertainty. We reiterate the importance of science communication with the public as a legitimate academic activity and suggest that this too needs to be incentivised. Scientific and health literacy in the population should be considered a public good.

32. We contend that there needs to be more emphasis on the value and need for randomised controlled clinical trials, rather than simply using large administrative databases for nested cohort studies (which are subject to much more bias). David Sackett, the ‘father’ of evidence-based medicine said that: “randomized clinical trials remain the best way to define how to best treat our patients”.²⁶ He also said that: “If you find that a study was not randomized, I suggest that you stop reading it and go on to the next article”. And he went on to say: “The biggest advances in clinical care over the next ten years will come from new knowledge obtained from clinical trials and not from application of hunches, audit or the review of old trials”. The use of non-experimental observational data in nested cohort studies is SIGN level 3 evidence—so that while attempts can be made via risk-adjustments to try to control for confounding, confounding is inherent in the methods used to generate this type of evidence. Such analysis understates complexity, and the data are at best still observational. As such, it is not possible to rule out the effects of unknown confounders—something only blinded randomisation in experimental controlled trials can achieve—and leads to false positive and false negative results.²⁷

33. We recommend that the strategy supports the better development and use of pragmatic point-of-care randomised trials. These are useful as a means for obtaining timely yet robust clinical efficacy data that are directly relevant to New Zealanders. The evidence they generate should be used to inform both

²⁵ NZMA. Health Equity Position Statement 2011. Available from http://www.nzma.org.nz/data/assets/pdf_file/0016/1456/Health-equity-2011.pdf

²⁶ Sackett et al (1997) Evidence Based Medicine: How to Practice and Teach EBM, 2nd edn, Edinburgh, Churchill Livingstone

²⁷ NZMA. Response to the discussion paper ‘Better Data—the benefits to the profession and the public’: New Zealand Medical Association submission to the Medical Council of New Zealand, 8 June 2015. Available from https://www.nzma.org.nz/data/assets/pdf_file/0007/42928/NZMA-Submission-on-MCNZ-discussion-document-Better-Data-the-benefits-to-the-profession-and-the-public.pdf

clinical decision making / guidelines, and policy / funding decisions.²⁸ More pragmatic randomised controlled trials should occur in secondary care settings. For example, there is a great opportunity to use datasets similar to ANZACS-QI^{29*} to be able to undertake comparative effectiveness research randomising large numbers of patients (eg, 30,000) to answer questions such as whether oxygen is beneficial or harmful in patients having heart attacks, or nil-by-mouth orders vs no restriction for procedures that may otherwise mean cancellation of operations when perhaps unnecessary. This type of research is cost effective and has the potential to improve patient care and significant patient outcomes worldwide.

34. It is important that there is a supportive environment and adequate resources to encourage young investigators to take part and be trained in clinical research.³⁰ A true-cost approach is preferable to blanket charges (eg, some DHBs charge a \$6,500 start-up fee, a \$2,000 pharmacy fee and 20% overhead charges). These charges are inequitable across different trials and may make research uncompetitive with other countries.

Question 16. How can we improve the uptake of research results and innovations?

35. We suggest there needs to be more work on developing opportunities for communication and engagement directly between the scientific community and the public. In addition to research, science communication should be considered a legitimate aspect of academic achievement and productivity. Academic institutions should support researchers to learn how to engage more effectively with policy makers, the media and the public, fulfilling their “critic and conscience” role under the Education Act 1989.³¹

36. With respect to the point about the ad hoc uptake of health research results and the long period for research findings to inform policies and settings on page 13, we request that “New Zealand” be removed from this sentence. Slow technology diffusion within health sectors appears to be a worldwide issue,³² without any apparent evidence that New Zealand is particularly bad. Selectively identifying New Zealand in this way reads unnecessarily badly for health professionals and services in this country.

We hope our feedback has been helpful, and look forward to learning the outcome of this consultation.

Yours sincerely



Dr Stephen Child
NZMA Chair

²⁸ van Staa TP, et al. The opportunities and challenges of pragmatic point-of-care randomised trials using routinely collected electronic records: evaluations of two exemplar trials. *Health Technol Assess*. 2014 Jul;18(43):1-146.

<http://www.journalslibrary.nihr.ac.uk/hta/volume-18/issue-43>

²⁹ Williams MJ, Harding SA, Devlin G, Nunn C, El-Jack S, Scott T, Lee M, Kerr AJ. National variation in coronary angiography rates and timing after an acute coronary syndrome in New Zealand (ANZACS-QI 6). *N Z Med J*. 2016;129(1428):66-78. Available from <https://www.nzma.org.nz/journal/read-the-journal/all-issues/2010-2019/2016/vol-129-no-1428-8-january-2016/6785>

³⁰ NZMA. Clinical academic career pathways in medicine Position Statement. June 2015. Available from https://www.nzma.org.nz/data/assets/pdf_file/0003/41979/Clinical-academic-career-pathways-in-medicine-2015.pdf

³¹ <http://www.legislation.govt.nz/act/public/1989/0080/latest/DLM183668.html>

* ANZACS-QI to date has reported observational nested cohort studies within a prospective nationwide registry cohort

³² Examples of how it takes time for health systems to get full update / action from initial messages can be found at the following sites: <http://www.cebm.net/what-has-ebm-done-for-healthcare/> and http://www.testingtreatments.org/wp-content/uploads/2012/09/TT_2ndEd_English_17oct2011.pdf (p14)