

Auckland Regional Public Health Service

Rātonga Hauora ā Iwi o Tamaki Makaurau



Working with the people of Auckland, Waitemata and Counties Manukau

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Submission on New Zealand Health Research Strategy: Public discussion document

Thank you for the opportunity for Auckland Regional Public Health Service (ARPHS) to provide a submission on the New Zealand Health Research Strategy public discussion document.

The following submission represents the views of ARPHS and does not necessarily reflect the views of the three District Health Boards it serves. Please refer to Appendix 1 for more information on ARPHS.

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Yours sincerely,

A blue ink signature of Jane McEntee, written in a cursive style.

Jane McEntee
General Manager
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A black ink signature of Dr. David Sinclair, written in a cursive style.

Dr. David Sinclair
Medical Officer of Health
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Key recommendations

1. The final New Zealand Health Research Strategy needs to convey such matters as:
 - the government’s medium term priorities for health research
 - its strategy, priorities and approach for funding health research
 - its approach to developing and maintaining research capabilities, capacity, collaboration and quality
 - its strategy for supporting implementation of existing and new research knowledge.
2. ARPHS considers that high priority and greater funding needs to be given to research which focuses on:
 - reducing health inequalities
 - topics with potential for high health gain for New Zealanders
 - application of research knowledge for conditions which affect significant proportion of the population (such as type 2 diabetes (including prevention, early detection, management etc.) and child abuse and neglect)
 - improving the effectiveness and quality of health services
 - child health, development, safety and well-being.
3. Research priorities can usefully reflect the relevant National Science Challenges such as “A Better Start”, “Ageing Well” and “Healthier Lives”.

Preamble

4. ARPHS considers the proposed vision, mission and guiding principles outlined in the New Zealand Health Research Strategy (the strategy) discussion document sets a potentially useful framework for a more cohesive and connected health research and innovation system (the system). This framework sets an appropriate benchmark for all stakeholders to aspire to and use as a reference point for their decision-making.
5. Health research would benefit from a clear, concise strategy. Read as a whole, the discussion document covers a wide number of issues, describing what a successful health research and innovation system might look like. However, a strategy that attempts to cover every facet of the system is likely to lack focus, and we believe there is merit in a strategy that has clear goals and how these might be achieved.
6. ARPHS also considers there are some fundamental issues underlying the current health research model and environment in New Zealand. We foresee that these issues, if left unaddressed, will hinder the proposed outcomes envisaged by the strategy.

7. The discussion document specifically asks where the challenges lie for health research in New Zealand. We consider the existing health research *model of delivery* perpetuates two issues inherent in New Zealand's health research and innovation system:
 - workforce instability and opportunities post tertiary education
 - funding uncertainty and inequities.
8. We support the strategic priority example of '*building the health research workforce, identifying the gaps and developing the skills*'. New Zealand's education system is producing a high number of people with research skills, but there continues to be limited employment opportunities outside educational institutions. There is currently a surfeit of non-medical public health postgraduates, for example, who have research training, with many in low paid jobs not using their skill base to the full potential.
9. In addition, in our experience, it seems income and real wages for scientists and researchers in New Zealand are falling relative to international standards. 2014 OECD data on human and financial resources devoted to research and development showed that New Zealand's gross domestic expenditure on research and development (R&D) as a percentage of GDP was 1.172%, and there were 7.87 researchers per thousand people in employment (FTE)¹. In comparison to other OECD countries, the ratio of researchers to R&D expenditure is relatively high. Between 2007 and 2013 the proportion of New Zealand's R&D expenditure directed towards health trended downwards from 13% to 11%.² R&D in New Zealand has been mostly stagnant since 1990, and in 2013 Spain and Portugal spent a higher percentage of their GDP on research and development³.
10. These factors have had a negative impact on the retention of skilled researchers and scientists, as they either find employment in other sectors, or if they cannot find a job, leave New Zealand for employment opportunities. A recent government publication⁴ found that around 40 percent of postgraduates are overseas nine years after completing study.
11. Secondly, short-term research funding creates uncertainty and forward planning difficulties, as there is no certainty for researchers that they will have a job once a funding contract expires. This type of funding has led to the casualisation of the research workforce with

¹ OECD (2016). Research and Development Statistics – Human and financial resources devoted to R&D, 2014. Retrieved from <http://www.oecd.org/innovation/inno/researchanddevelopmentstatisticsrds.htm>

² OECD (2016). Gross domestic expenditure on R-D by sector of performance and socio-economic objective. Retrieved from https://stats.oecd.org/Index.aspx?DataSetCode=GERD_FUNDS#

³ OECD (2016), Gross domestic spending on R&D (indicator). Retrieved from <https://data.oecd.org/rd/gross-domestic-spending-on-r-d.htm>

⁴ Education Counts (2016). Fact Sheet – Young graduate outcomes – destinations (updated March 2016). Retrieved from https://www.educationcounts.govt.nz/data/assets/pdf_file/0006/171672/Young-graduate-outcomes-destinations-factsheet.pdf

many part-time workers. Again, this is negatively impacting on New Zealand's ability to maintain a skilled research workforce that remains 'match fit'.

12. There is also an equity funding issue, as those senior researchers that have received funding in the past have a greater chance of receiving future funding due to the scoring system used for assessing applications. This situation ensures the same researchers are receiving the available funding, which restricts the sharing of knowledge, and potentially discourages innovation and new ways of thinking.
13. Also, some researchers in the health research workforce have other work responsibilities that sit outside the system, and often do not have sufficient time to develop high quality research bids within the timeframes provided.
14. Consideration of how a more equitable and better resourced *model of delivery* can be provided should be a high priority for the final strategy.

Specific questions

15. Below, please find responses to some of the questions posed in the Ministry of Health's discussion document.

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

16. The second bullet point for the vision states that *clinicians will be actively involved in health research, enabling effective transition of research results*. While we recognise this statement is intentionally directed towards clinicians, we consider there is greater scope for the vision to explicitly capture the idea that all health practitioners, including nurses, dentists, occupational therapists etc, along with non-medical researchers, form an important part of the health research landscape. This is supported by the 'one-team' approach canvassed by the New Zealand Health Strategy.
17. A health research system dominated by clinicians is likely to place greater emphasis on research related to treatment and diagnosis rather than prevention.
18. In contrast, a system that incorporates multiple viewpoints and voices will encourage innovation and new ways of thinking about the myriad of issues that affect the health and wellbeing of New Zealanders. Embedding this message in the strategy will support its collaborative vision, and signal that there needs to be clear career research pathways and incentives for non-clinicians who wish to undertake health research. Currently, there appears to be a poorly developed career pathway for non-medical staff who wish to be involved in research.

19. We therefore recommend a new bullet-point be introduced that explicitly acknowledges that many professions are actively involved in health research.

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

20. To help generate world class researchers we believe a proposed mission for research-based tertiary institutions should be to deliver courses that align with the needs of the wider system. This outcome could be placed under the heading '*Entities performing research*'. We have commented further on this matter under question 8.

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

21. The strategy's ten year outlook is stipulated in the vision statement, and a number of bullet-points describe how the system should be operating by 2026. However, we consider the strategy should also contain a guiding principle that recognises the system needs to be looking beyond a ten year time frame, and be mindful of opportunities and potential threats. Adopting this outlook will ensure the system is not caught unawares and is prepared to respond to an emerging issue when needed.
22. We would also like to see a new guiding principle introduced that specifically recognises that New Zealand's system does not operate in isolation, but is connected with and influenced by happenings in the wider world. While the system should focus on markedly improving the health, social and economic wellbeing of all New Zealanders, researchers also need a global focus, as more than ever, New Zealand is connected to rest of the world through globalisation. The inclusion of a 'decision-making' guiding principle that expresses this type of strategic thinking is consistent with some of the rhetoric in the discussion document (including the strategic priority examples), and relates to the sharing of knowledge and information with researchers from other parts of the world. However, it also acknowledges that issues that either materialise beyond New Zealand's borders, or influenced by external forces, may pose a serious risk to New Zealanders health and wellbeing e.g. Zika virus, Ebola virus, climate change.

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

23. We consider the final strategy should have a focus on how particular aspects of the system will work, such as how the decision making framework for setting health research priorities will be developed. Strategic Priority Example One suggests that health research priorities be set through robust and transparent processes involving more partnerships with those who

have a stake in health research. It states the key mechanism for doing this will be the final strategy, and the Health Research Council's (HRC) three year investment plan. We would support a greater level of detail in the final strategy on how research priorities will be decided, and suggest that targets, such as the recent government targets (i.e. Better Public Services to increase infant immunisation rates and reduce the incidence of rheumatic fever) and those established under initiatives such as Healthy Auckland Together's baseline⁵ reporting could be used to set research direction.

24. We believe a greater research focus on preventative measures and the wider social determinants of health is warranted. Effective and appropriate early intervention can lead to significant health gain across the population, but rather than presuming particular interventions work, research is required to understand and inform best practice.
25. A 2009 report⁶ that aimed to better understand the applied health delivery research landscape in New Zealand indicated a large proportion of research funded by the HRC in 2007 was directed towards clinical research:

"In 2007, 982 applications for human health research were approved by New Zealand regional health ethics committees. Of these, 144 were for trials sponsored by a pharmaceutical or medical device company, 404 were for clinical trials funded from other sources, and 434 were for clinical and nonclinical research other than trials." (page 5)

26. From our experience we suggest this focus on clinical research has changed little since the publishing of this report.
27. We are supportive of the themes outlined in Strategic Priority Example Two, but we would like to see more of a focus on research and innovative measures that take a whole-system approach, and seek to address the adverse health outcomes and inequalities associated with particular environmental settings (i.e. food, planning, work, transport environments).
28. The strategic priorities listed in the strategy should include a focus on promoting the health of marginalised populations (i.e. migrants) and addressing diseases of poverty (such as rheumatic fever/TB etc.). We note a strategic priority example refers to addressing the health needs of specific populations, paying particular attention to the needs of the Maori and Pacific populations and disabled population. However, there needs to be greater focus on what this actually means. The final strategy would benefit from being more prescriptive about what issues are facing these populations.

⁵ HAT baseline report available at <http://www.healthyaucklandtogether.org.nz/assets/Uploads/Healthy-Auckland-Together-Monitoring-Report-2015-Baseline-Final.pdf>

⁶ Ministry of Research, Science and Technology. (2009). *Health Delivery Research Landscape – An overview of New Zealand research capability focused on health delivery*. Wellington, New Zealand.

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

29. We are supportive of the strategic priority to enhance the uptake of health research results across the social and health sectors. However, we believe it is important that outputs are clearly distinguished from outcomes. For example, maternal pertussis vaccination during pregnancy is very low (13%) for protection of the neonate from disease before their primary series of immunisations can begin. While the output is the identification of the issues that have caused this low statistic, the final outcome is the changes required which will correct this situation.
30. The final strategy should try and outline a system that will deliver meaningful outcomes by setting clear pathways for research output. Improving access to research results will assist with this process, but setting defined health targets for particular issues may also assist in transforming research output into practical actions. Realistic targets will help bring stakeholders together, and focus their energy towards achieving a particular goal or outcome as we have seen with immunisation targets.
31. Strategic Priority Example Five refers to building the health research workforce, and identifying the gaps and developing the skills.
32. On 13 July an ARPHS representative attended the Auckland focus group on the health research workforce, and advised attendees identified the following skill gaps:
 - biostatistics and epidemiology
 - researchers that can think broadly about issues such as climate change, and subsequently produce programmes of research that will mitigate the adverse effects
 - research management and project evaluation skills.
33. In the first instance we believe research skills should be developed at universities. Research papers should form part of the core structure of any university programme (medical and non-medical) to ensure the necessary skills are developed.
34. Schools have a part to play in terms of building foundational skills such as understanding statistics. At the workshop it was mentioned that some non-medical university students lack confidence in learning statistics and epidemiology.
35. Other potential measures to help upskill New Zealand's health research workforce could include:
 - greater investment in bringing medical trainees into DHBs to do research projects in partnership with existing staff
 - incentives for clinicians to undertake PhDs could be improved.

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

36. We consider efficiencies in public health research funding could be gained by making better use of existing data. For instance, ARPHS has a wealth of communicable disease control data at its disposal that is just waiting to be extracted and examined. Analysis of this data will enable us to thoroughly evaluate whether we responded well to events such as the H1N1 influenza pandemic in 2009. From our findings we can then develop best practices for managing cross border threats in the future.

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

37. Adopting a research focus on preventative measures and the wider social determinants of health is supported by the 'Closer to home' theme outlined in the New Zealand Health Strategy, which is about promoting wellness and preventing long-term conditions through both population-based and targeted initiatives that are evidence-based.

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

38. Please refer to our introductory comments.

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

39. Information sharing amongst stakeholders could be improved by facilitating the linking of databases. This measure would benefit the research community if approved raw data from stakeholders' databases could be extracted for research purposes and further use.

40. In addition, new systems could be developed that provide researchers with an easy to navigate interface to research priorities, results and research bids.

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

41. Strategic Priority Example Four mentions that the uptake of health research results could be enhanced by better access to and dissemination of research results. Research results cannot be utilised or acted upon if people do not know about them. A priority action should be to provide a medium (i.e. a central directory or communications portal) through which research results can be uploaded, accessed, shared and discussed. For instance, New Zealand could develop its own researchgate.net.

42. A centralised communications hub is also likely to help minimise research duplication, help identify research gaps, and therefore ensure research funding is allocated efficiently.

43. We note the New Zealand Health Strategy advocates for “great leadership’. Transforming research results into meaningful outcomes also requires those with the decision-making power and influence to show leadership by working collaboratively across organisations.
44. For example, a multifaceted approach to rheumatic fever research has been developed, which revolves around University and hospital staff. It involves basic, epidemiological and clinical research, and has collaborators in Australia for vaccine development - this is an effective and comprehensive model.

Conclusion

45. Thank you for the opportunity to help inform the development of the proposed New Zealand Health Research Strategy.

Appendix 1 - Auckland Regional Public Health Service

Auckland Regional Public Health Service (ARPHS) provides public health services for the three district health boards (DHBs) in the Auckland region (Auckland, Counties Manukau and Waitemata District Health Boards).

ARPHS has a statutory obligation under the New Zealand Public Health and Disability Act 2000 to improve, promote and protect the health of people and communities in the Auckland region. The Medical Officer of Health has an enforcement and regulatory role under the Health Act 1956 and other legislative designations to protect the health of the community.

ARPHS' primary role is to improve population health. It actively seeks to influence any initiatives or proposals that may affect population health in the Auckland region to maximise their positive impact and minimise possible negative effects on population health.

The Auckland region faces a number of public health challenges through changing demographics, increasingly diverse communities, increasing incidence of lifestyle-related health conditions such as obesity and type 2 diabetes, infrastructure requirements, the balancing of transport needs, and the reconciliation of urban design and urban intensification issues.