The Case for Embedding Health Research as an Essential Component of New Zealand's Reformed Health and Disability System

NZHR Submission to the Health and Disability System Review Transition Unit (HDSRTU)

Introduction

New Zealanders for Health Research (NZHR) was established in November 2015 to bring about increased investment in health research from government, industry and philanthropy. We believe that health research saves and improve peoples' lives, and directly and indirectly contributes to New Zealand's economic prosperity. We are therefore committed to ensuring that health research is fully valued, that it is embedded as an essential component of New Zealand's health system, and there is a level of investment in health research which results in the best possible health, productivity and economic returns.

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Recommendations

1. The Health Research Council be properly funded and included as an essential component of the reformed health system, especially given the mandate to (re)focus its research effort to, among other things, specifically address systemic and translational issues that impact negatively on equity of both access and health outcomes[1]

2. The White Paper's "Public Health Agency" be renamed "Health Intelligence Unit" (HIU). As per the White Paper's expectation of the Public Health Agency, the HIU will put scientific expertise at the heart of policy making and in addition will be responsible for:

    1) gathering evidence from HRC funded and other New Zealand and global research projects about what works and doesn't work to improve health system access and health outcomes, including equity of access and outcomes

    2) translating the results of health research into public health policy and strategy, including auditing and reporting on the implementation of such policy and strategy at predetermined timepoints

    3) enabling the health system to understand and respond effectively to threats to public health, whether they be from: external factors such as pandemics, climate change, loss of biodiversity and other unpredicted threats to New Zealander's health; lifestyle choices and decisions, including incentives and disincentives, which make us well or unwell; internal factors such as contaminated water supplies and environments; or misinformation.

    4) identifying and promulgating up to date evidence based best practice standards and guidelines for clinical care and service delivery (similar in concept to the now disestablished Clinical Guidelines Group)

    5) monitoring and evaluating the impact, effectiveness and efficiency of commissioning/provision arrangements on improved and equitable access and health outcomes, and requiring commissioning agencies to amend their purchasing expectations as required

3. A distinct commissioning agency be established within Health New Zealand and that both this agency and the Māori Health Authority contractually require health service providers as a condition of their funding to: deliver services in accordance with best practice standards and guidelines as identified by the HIU; to be involved in

[1] Health Research Council. MBIE. Ministry of Health. December 2019. The New Zealand Health Research Prioritisation Framework: Maximising the benefits of health research for New Zealanders. https://www.hrc.govt.nz/sites/default/files/2020-01/NZ%20Prioritisation-Framework-FA-web_0.pdf

undertaking health research; and to have demonstrable processes for translating the results of health research into policy and practice

4. Workforce development strategies be implemented through the above commissioning arrangements which would require health providers to routinely deploy and enable through time allocations and support staff research fellows, clinical research specialists etc as key members of clinical and health care teams, responsible for ensuring that clinical decisions are supported by the best evidence

5. Clinical training and continuing clinical education and registration agencies be mandated to ensure that their processes require emerging and current clinicians to practice according to best evidence based standards of care and undertake research at a level which could translate into criteria for professional development and/or CME points

6. The Māori Health Authority and Health New Zealand's commissioning agency be required to meet premature amenable mortality, amenable morbidity, and equity targets and be given the ability to purchase evidence based best practice services from whichever organisations or entities are best placed to help meet those targets (irrespective of whether or not they are government owned), including individuals and whanau/family.

The case for embedding health research as an essential component of the reformed health and disability system

Health research is the single most important way in which we improve our healthcare – by identifying the best means to prevent, diagnose and treat conditions. So, we need to bolster delivery of innovative research across all phases, all conditions and right across New Zealand, as we work to build a better, more effective, health and disability system.[2] Yet:

- The final report of the Health and Disability System Review[3] failed to include recommendations for valuing and embedding health research as an essential component of New Zealand's health system, despite NZHR's submission[4] arguing otherwise

- The HDRSTU's Health and Disability System White Paper[5], which was the basis of the Health Ministers' announcement[6] of what the reformed health and disability system will look like, also fails to recognise the imperative for the country's health research system to be embedded within a reformed health system.

- Since November 2020 the HDSTRU has met formally with over 150 organisations[7], none of which directly represent New Zealand's health research sector, despite NZHR offering to so meet in a February 2021 letter to the Transition Unit's Director.

HEALTH RESEARCH IS THE SINGLE MOST IMPORTANT WAY IN WHICH WE IMPROVE OUR HEALTHCARE – BY IDENTIFYING THE BEST MEANS TO PREVENT, DIAGNOSE AND TREAT CONDITIONS… WE NEED TO BOLSTER DELIVERY OF INNOVATIVE RESEARCH ACROSS ALL PHASES, ALL CONDITIONS AND RIGHT ACROSS NEW ZEALAND, AS WE WORK TO BUILD A BETTER, MORE EFFECTIVE, HEALTH AND DISABILITY SYSTEM

In response to the apparent marginalisation of New Zealand's health research sector as a significant component of the wider health system, NZHR is presenting this paper as an unsolicited submission.

[2] Paraphrased from Department of Health and Social Care. March 2021. Saving and Improving Lives: The Future of UK Clinical Research Delivery. https://www.gov.uk/government/publications/the-future-of-uk-clinical-research-delivery/saving-and-improving-lives-the-future-of-uk-clinical-research-delivery

[3] Health and Disability System Review. June 2020. Final report / Pūrongo whakamutunga. https://systemreview.health.govt.nz/final-report/

[4] NZHR. May 2019. Submission on the Review of the New Zealand Health and Disability System. https://www.nz4healthresearch.org.nz/wp-content/uploads/2019/05/NZHR-submission-Health-System-Review-final-280519-Final.pdf

[5] Health and Disability Review Transition Unit. April 2021. Our health and disability system: Building a stronger health and disability system that delivers for all New Zealanders. https://dpmc.govt.nz/sites/default/files/2021-04/heallth-reform-white-paper-summary-apr21.pdf

[6] Beehive. April 2021. Major reforms will make healthcare accessible for all NZers. https://www.beehive.govt.nz/release/major-reforms-will-make-healthcare-accessible-all-nzers

[7] Health and Disability Review Transition Unit. July 2021. List of Engagements. Health and Disability Review Transition Unit - List of Engagements | Department of the Prime Minister and Cabinet (DPMC)

The imperative for New Zealand's health research system to be embedded within the reformed health system is drawn from the New Zealand Health Research Strategy[8], the Productivity Commission's "Frontier Firms" report[9], and NZHR's briefing to incoming ministers following the 2020 General Election.[10]

New Zealand Health Research Strategy (NZHRS) 2017 - 2027

The NZHRS is a whole of government strategy which applies to the health system in its entirety, and all aspects of health and medical research. The health system, either as it is currently or as it will become in its future reformed state, is not exempt from the NZHRS, and NZHR draws particular attention to the following imperatives:

- "A world-leading health research and innovation system has a vibrant research environment in the health sector. The health sector is a key part of New Zealand's national innovation system, performing research, generating knowledge and making the most of innovations. All levels of care…have a role to play in the health research and innovation system." NZHRS Strategic Priority 2, page 16;

- "For health service agencies to achieve their objectives of improving health and reducing inequities, they need a strong evidence base. In turn, to achieve this evidence base, they need an environment and culture of enquiry and innovation with research integrated into health care systems and population health initiatives." NZHRS Strategic Priority 2, Action 5, page 16

- "Clinical research in New Zealand could be strengthened by … improving the environment for clinical trials and promoting industry investment." NZHRS Strategic Priority 2, Action 6, page 17

- "The Government will seek to increase the number of partnerships between industry … and health sector agencies…" NZHRS Strategic Priority 4, Action 9, page 23

Productivity Commission "Frontier Firms" report

The New Zealand Productivity Commission inquiry into maximising the economic contribution of New Zealand's frontier firms was commissioned by the Ministers of Finance, Economic Development and Trade and Export Growth. Its purpose was to identify policies and interventions that could maximise the performance and contribution to the economy of New Zealand's frontier firms through: improving the performance of the frontier firms themselves; and helping innovations, including healthtech innovations, diffuse more effectively from frontier firms to other New Zealand firms.

[8] New Zealand Health Research Strategy 2017 – 2027. June 2017. Ministry of Health and MBIE. https://www.health.govt.nz/system/files/documents/publications/nz-health-research-strategy-jun17.pdf
[9] New Zealand Productivity Commission. April 2021. New Zealand Firms: Reaching for the Frontier. Final report. https://www.productivity.govt.nz/assets/Documents/Final-report-Frontier-firms.pdf
[10] NZHR. November 2020. Briefing Paper for the incoming Ministers of Health and Science, Research and Innovation: Ka Whakarauoratia te Hunga e te Rangahau Hauora/Health Research Saves Lives. https://www.nz4healthresearch.org.nz/wp-content/uploads/2020/11/NZHR-briefing-paper-for-incoming-Ministers-241120.pdf

Healthtech is defined by the Productivity Commission as including medical devices; digital health and IT products; and diagnostics and therapeutics. Healthtech innovation therefore can be broadly interpreted to be synonymous with health and medical research.

Section 10.5 of the report, which addresses how District Health Boards could be more effectively integrated into the healthtech innovation ecosystem, concludes with a recommendation that *"the Government should use its intended major health system reform to improve the mandate, funding and incentives for [government funded health service providers] to participate in the healthtech innovation ecosystem, for the mutual benefit of the healthtech sector, and the efficiency, effectiveness and accessibility of New Zealand's health and disability system"*. The report makes the following points in support of this recommendation:

- "District Health Boards (DHBs) are hugely important in New Zealand's health system, yet most are inactive in supporting [and participating in] healthtech innovation. As a result, opportunities for mutual benefits for the healthtech sector and for productivity and accessibility within the health system are being lost. The main reasons for lack of support from DHBs are their lack of mandate and incentive to participate in innovation, the lack of targeted innovation funding, and rigidities in their procurement processes. Also, health policy provides no effective strategy on innovation and learning to guide DHBs." (NZHR addition in parentheses)

- "DHBs are not well set up to collaborate on innovation. In the Commission's case study of New Zealand's healthtech sector, participants consistently commented that opportunities are limited for healthtech firms to collaborate with DHBs to trial and develop innovative new products and services and secure win–win outcomes".

- "Several wins are also possible for DHBs. Innovation can lead to gains in efficiency, effectiveness and people's access to health services. Opportunities for clinical staff to participate in new approaches can be stimulating and rewarding. This can be a drawcard for recruitment. Participation in successful innovation can enhance the national and international profile and reputation of the DHB and the New Zealand health system. Partnership in successful innovations can become a source of revenue for DHBs."

- "DHBs are the main funders and a major deliverer of both primary and secondary healthcare in New Zealand. Yet they have various features that healthtech stakeholders see as stifling innovation. DHBs lack the incentive and mandate to participate in innovation. For example, s.28 of the Public Health and Disability Act (2000) requires DHBs to obtain the consent of the Minister before undertaking joint ventures with healthtech firms. DHBs are predominantly set up to deal with the patients in front of them, making it difficult to look beyond to opportunities for innovation and change that could lead to improved health outcomes over the longer term".

- "DHB's lack targeted funding for innovation. In general, DHBs do not have innovation funds or discretionary funding to support innovation. While innovation can improve patient outcomes it often comes at additional cost for DHBs".

- "DHB's participation in clinical trials is not currently mandated or rewarded. Almost all the Commission's case-study interviewees highlighted the challenge of opening up DHBs

to play a bigger role in innovation and some drew a contrast with overseas jurisdictions. For example, New Zealanders for Health Research (NZHR) submitted: NZHR adds that many of its stakeholders draw contrasts with the UK where health research is an essential, normal and funded component of clinical practice. As the UK's NHS based health system arguably has more in common with the New Zealand health system… if the New Zealand system were to look something like the UK system [adopting best practices from similar such models rather than necessarily replicating them] that in NZHR's view would be a good start". (NZHR addition in parentheses)

- "Several stakeholders called for the creation of a new mechanism, at a national or regional level, that would support and incentivise DHBs to engage in innovation. The Health Research Strategy has attempted to provide a coherent strategy on innovation. However, inquiry participants felt that implementation has been slow, poorly coordinated and lacking in resource to ensure DHBs engage with healthtech innovation"

NZHR briefing to incoming ministers

NZHR's November 2020 briefing paper to the incoming Ministers and Associate Ministers of Health and Research, Science and Innovation[11], continued to advocate strongly for health research to be embedded as an essential component of the health system. We recommended that:

1. Health research must be embedded as a key enabler of the best possible health outcomes in any design or redesign of New Zealand's health and disability system. To this end:

    2. The Ministry of Health must hold all publicly funded health service providers accountable through its contracting and commissioning processes for both engaging with health and medical research and demonstrably translating results into policy and practice.

    3. The agencies responsible for implementing the New Zealand Health Research Strategy (Ministry of Health, MBIE and the Health Research Council) must be required, and fully resourced to enable them to achieve, implementation by 2027

    4. Prior to their implementation the recommendations of the final report of the review of the New Zealand Health and Disability System must, with the assistance of external expert review, be thoroughly and formally reviewed by Cabinet, preferably through the Health Committee, to ensure among other things that its recommendations will result in better health for all New Zealanders (as required by the Review's terms of reference), and that health research is explicitly embedded within the health system as a key enabler of improved health outcomes (including reduced premature amenable and non-amenable mortality)

    5. Specific government investment in health research should be increased from the then current 0.7% of health care costs to 2.4%. At that time we said this should occur withing the ten year time frame of the Health Research Strategy, but we now

[11] copied to Opposition party spokespeople, the Chief Executives of the Health Research Council and Ministry of Health, the Prime Minister's, MBIE's and MoH's Chief Science Advisors, and subsequently to the Director of the HDRTU

advocate for a ten year funding trajectory from any given point in time extending beyond the Health Research Strategy's current 2027 time horizon

The briefing paper drew the Ministers' attention to NZHR's estimated annual number of 5000 premature and unnecessary deaths, and a further estimated 7000 premature deaths which are not yet amenable to prevention or treatment.

We said that the former figure represents a failure both on the part of the health system to perform and the health research system to identify and recommend effective interventions that would see this figure fall significantly. NZHR also said that to address amenable mortality there should be investment in health research which will provide an understanding of how to effectively address barriers to translating knowledge into practice.

This new knowledge could then support, for example, commissioning agencies to contractually require health service providers, public health and health promotion agencies, and other organisations to deliver services in accordance with national evidence based best practice standards. Furthermore, the commissioning agencies themselves could be required to meet premature amenable premature mortality targets (as opposed to being permitted to continue to passively rely on the historical, but in NZHR's view unimpressive, annual improvement rate of 1.2%)

In respect of the second figure we noted that looking back over the sweep of medical and health history people have died prematurely from all manner of illnesses that at one time would not have been considered amenable to treatment or prevention. Advances in knowledge, resulting from health research, have changed and are changing this. For example, although the New Zealand prevalence of non-treatable Mendelian conditions (which are arguably among the least amenable to prevention and treatment) currently stands at about 200,000[12] [13], recent rapid advances in health (ie genetic) research are likely to result in many of these conditions becoming amenable to prevention and treatment in the future[14]. Similarly, health research focusing on T-cell based immunotherapy is already in the process of rendering treatable many hitherto incurable cancers[15].

Moreover New Zealand health researchers have already been in the forefront of developing therapies and interventions for addressing hitherto non-amenable mortality including for example: a powerful new test to detect heart failure developed in 1995 which reduced mortality in 35% of patients under 75 years of age[16]; development of the wireless heart pump which transfers power via magnetic fields instead of wire cables which make patients vulnerable to infections which were fatal in forty per cent of cases;[17] and the clinical trials work led by Professor Ed Gane to develop a new class of anti-viral therapy to treat Hepatitis C, where during the trial phase alone 3000 people have been cured, with a 99% success

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[12] RDNZ estimates that 300,000 New Zealanders have a rare disorder (https://raredisorders.org.nz/about-rare-disorders/raredisease-day/rare-disease-day-2020/), 72% of which are genetic in origin (https://raredisorders.org.nz/about-rare-disorders/factsand-figures/)
[13] Treatments exist for about 5% of Mendelian conditions. Metzl, J. Hacking Darwin. Genetic Engineering and the Future of Humanity. 2019. Sourcebooks. Illinois
[14] Ibid.
[15] https://www.bbc.com/news/health-51182451
[16] New Zealand Health Research Strategy 2017 – 2027. June 2017. Ministry of Health and MBIE. https://www.health.govt.nz/system/files/documents/publications/nz-health-research-strategy-jun17.pdf
[17] Health Research Council. 2015c. Research to Action: Improving the lives of New Zealanders through health research, HRC Investment Impact Report for the Ministry of Business, Innovation and Employment. Auckland: Health Research Council of New Zealand. http://www.hrc.govt.nz/sites/default/files/Research%20to%20Action%20-%20HRC%20IIR%202015.pdf

rate, no side effects, and an estimated savings of $200m in drug costs alone when compared with previous therapies.[18]

Failure to include health research as a key enabler of achieving improved health outcomes compromises the ability to offer hope and treatment to people and their whanau/families for whom the only current alternatives are at best palliative. In additional to focusing on amenable premature mortality NZHR believes therefore that the New Zealand health system should also be actively addressing the country's non-amenable premature mortality figures, and we recommend that the health system aims initially to achieve reductions of say 5% per annum.

Mortality is the tip of the much bigger iceberg of poor health or morbidity which consumes most of this country's health system capacity. The Ministry of Health has acknowledged that New Zealanders are *"living longer in poor health" and that "only 70–80% of the years of life gained over the past quarter century have been years lived in good health: our health system and wider society have proved more adept at preventing early death than at avoiding or ameliorating morbidity. A greater focus on addressing the impact of nonfatal disabling conditions, whether through prevention or improved management, will enable people to live more of their 'extra' years of life in full health"*[19].

[18] Gane et al., Lancet Gastroenteral Hepatol, 2: 805-13 (2017), also Gane et al., Gastroenterology, 151: 902-909 (2016)
[19] https://www.health.govt.nz/publication/health-loss-new-zealand-1990-2013

Recommendations for a reformed New Zealand health system

NZHR believes that the arrangements within the current health and disability system for translating health research and health innovation in all forms into policy and practice need to be significantly improved within the future reformed health and disability system so that there is an obligation on health service providers to implement evidence based best practice and for commissioners to purchase for improvements in, and quantify any subsequent impact on, health outcomes.

NZHR therefore recommends that:

1. The Health Research Council be properly funded and included as an essential component of the reformed health system, especially given the mandate to (re)focus its research effort to, among other things, specifically address systemic and translational issues that impact negatively on equity of both access and health outcomes[20]

2. The White Paper's "Public Health Agency" be renamed "Health Intelligence Unit" (HIU). As per the White Paper's expectation of the Public Health Agency, the HIU will put scientific expertise at the heart of policy making and in addition will be responsible for:

    1) gathering evidence from HRC funded and other New Zealand and global research projects about what works and doesn't work to improve health system access and health outcomes, including equity of access and outcomes

    2) translating the results of health research into public health policy and strategy, including auditing and reporting on the implementation of such policy and strategy at predetermined timepoints

    3) enabling the health system to understand and respond effectively to threats to public health, whether they be from: external factors such as pandemics, climate change, loss of biodiversity and other unpredicted threats to New Zealander's health; lifestyle choices and decisions, including incentives and disincentives, which make us well or unwell; internal factors such as contaminated water supplies and environments; or misinformation.

    4) identifying and promulgating up to date evidence based best practice standards and guidelines for clinical care and service delivery (similar in concept to the now disestablished Clinical Guidelines Group)

    5) monitoring and evaluating the impact, effectiveness and efficiency of commissioning/provision arrangements on improved and equitable access and health outcomes, and requiring commissioning agencies to amend their purchasing expectations as required

3. A distinct commissioning agency be established within Health New Zealand and that both this agency and the Māori Health Authority contractually require health service

[20] Health Research Council. MBIE. Ministry of Health. December 2019. The New Zealand Health Research Prioritisation Framework: Maximising the benefits of health research for New Zealanders. https://www.hrc.govt.nz/sites/default/files/2020-01/NZ%20Prioritisation-Framework-FA-web_0.pdf

providers as a condition of their funding to: deliver services in accordance with best practice standards and guidelines as identified by the HIU; to be involved in undertaking health research; and to have demonstrable processes for translating the results of health research into policy and practice

4. Workforce development strategies be implemented through the above commissioning arrangements which would require health providers to routinely deploy and enable through time allocations and support staff research fellows, clinical research specialists etc as key members of clinical and health care teams, responsible for ensuring that clinical decisions are supported by the best evidence

5. Clinical training and continuing clinical education and registration agencies be mandated to ensure that their processes require emerging and current clinicians to practice according to best evidence based standards of care and undertake research at a level which could translate into criteria for professional development and/or CME points

6. The Māori Health Authority and Health New Zealand's commissioning agency be required to meet premature amenable mortality, amenable morbidity, and equity targets and be given the ability to purchase evidence based best practice services from whichever organisations or entities are best placed to help meet those targets (irrespective of whether or not they are government owned), including individuals and whanau/family.

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NZHR constituency

In developing this submission NZHR has consulted with its platinum, gold, silver and bronze partners and members as set out below (and from whom we derive 100% of our funding).

Platinum

Gold

Silver

Bronze

Foundation