

Aide-Mémoire

Innovative work across Evidence, Research and Innovation

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To:	Hon Dr Shane Reti, Minister of Health		
Consulted:	Health New Zealand: <input type="checkbox"/> Māori Health Authority: <input type="checkbox"/>		

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Purpose

1. As a centre of excellence within the Ministry of Health, the Evidence, Research and Innovation (ERI) directorate promotes and provides high quality analytics, research, evidence and science advice to better inform strategy and decision-making and drive innovation within the health system.
2. This paper provides you with insights on some of the current work within ERI, including:
 - a. Analytics
 - b. Health Technology Assessment
 - c. Horizon scanning.
3. We will provide you with updates on this work at relevant times and are happy to discuss this information with you. Additionally, we can provide further information on these topics, if useful.



Peter Dolan

Group Manager

Evidence Research and Analytics

Evidence, Research and Innovation

Analytics

Background and context

1. Analytics and insights have a powerful impact on shaping the way that a health system performs and delivers care, and on the health and wellbeing outcomes that are ultimately achieved. The Evidence, Research and Innovation Directorate | Te Pou Whakamārama (ERI) promotes and provides high-quality analytics, insights, and evidence to inform strategy and decision-making within the New Zealand health and disability system. It is a key enabler towards the realisation of healthy futures for all New Zealanders.
2. The analytics and insights function is distributed across the Ministry, and is delivered from teams within the Public Health Agency, the Regulation and Monitoring Directorate, the Clinical Community and Mental Health Directorate, the Māori Health Directorate as well as from ERI.
3. Additionally, the Ministry works closely with other Health System agencies, including Health New Zealand | Te Whatu Ora, Māori Health Authority | Te Aka Whai Ora, PHARMAC, Health Quality and Safety Commission and others.

Analytics is a critical enabling function

4. The Ministry uses analytics, insights and high-quality national and international research and evidence to address knowledge gaps in and evaluate service delivery, strategy and policy development, and to drive improvements in system performance, quality and safety.
5. ERI provides a range of operational and strategic analytics, both in advance of, and in response to events and interventions. We do this through different lenses, including examining different populations, conditions, or service use.

Analytics can support a social investment approach

6. As part of its analytics work programme, ERI makes use of Stats NZ's Integrated Data Infrastructure (IDI)¹, which allows us to look at data across domains and through time, so that we can better understand the complexity of people's lives. Utilising integrated data allows us to see the compounding and interrelated factors that affect peoples' lives and needs over time.
7. We also use integrated data to examine the effects of decisions in one domain on outcomes in another, for example we may discover and be able to quantify and evaluate

¹ <https://www.stats.govt.nz/integrated-data/integrated-data-infrastructure/>

unexpected or predicted benefits², or perverse outcomes. We can use this knowledge to make better decisions, this forms part of the social investment approach.

8. The applications of this approach in health are widespread and can be used to develop models of the future health demand to identify the impacts, risks and opportunities for the system by addressing the factors contributing to conditions such as cardiovascular disease and diabetes.

Our analytics are widely used

9. Analytics produced by ERI, and across the Ministry have been used to inform decisions and provide insights across a range of topics, including:
 - Compiling a broad range of evidence to inform government priorities, including the Pae Ora Population Health Strategies
 - Health workforce analytics using workforce registration data and the IDI – eg providing a base for ongoing analysis looking at patterns of employment, movements into and out of the health workforce and the education pipeline
 - Analysis of people not enrolled with primary care and expired enrolment in primary care and their attributes to inform interventions or opportunities for increased support across the social sector
 - Emergency department users most recent engagement with primary care to investigate potential steps to avoid hospitalisation
 - Impact of policy and funding interventions of the behaviours of patients and their interactions with the health system – eg prescribers and pharmacists.

Surveys are an important for of the analytics ecosystem

10. Well-designed surveys with representative samples are also an important part of delivering effective analytics. The New Zealand Health Survey provides an important evidence base for informing health system funding, policy and programmes, collecting information that is not available elsewhere.
11. The Health Surveys team are starting work to improve the delivery model of the New Zealand Health Survey for the future. A report was commissioned in 2022, providing advice about implementing a new approach for the collection of the New Zealand Health Survey.
12. The Health Surveys team are also collaborating internationally to understand approaches to their health surveys, as well as with Stats NZ and other government agencies to understand the trends and future plans for survey collection across NZ.

² An example of this can be found in the evaluation of the healthy homes initiative

<https://www.tewhatauora.govt.nz/publications/healthy-homes-initiative-three-year-outcomes-evaluation/>

13. Alongside ensuring the sustainability of the New Zealand Health Survey, there is also an opportunity to take a more strategic and sustainable approach to meeting information needs more generally. This could include the establishment of new surveys, adding questions or modules to existing surveys across the data system, longitudinal studies, increased use of administrative data, and IDI based research. There are a range of options relating to the scope and quality of surveys that could provide different cost profiles and delivery timeframes.

Establishing a system leadership role for analytics and insights

14. We have worked with Health New Zealand and the Māori Health Authority to establish a Data and Analytics Council. This is a forum to ensure there is consistency and shared approaches to the health sector's Analytics Operating Models. The Council helps address system risks for analytics through:
 - a. Consistency - promulgating shared standards and approaches to working with health data to avoid presenting Ministers, decision-makers, and the public with different information about the same concepts
 - b. Efficiency – shared or common approaches for analysis to avoid duplication of work, inefficient use of scarce analytical resource
 - c. Collaboration – creating channels and opportunities for teams to work across agency boundaries to share knowledge and code to strengthen the health analytics workforce as a whole.

Next Steps

15. We are available to discuss with you;
 - a. the details of our analytics work programme
 - b. how we're working with Health New Zealand to ensure coordinated and consistent analytical practice across the health data system.

Health Technology Assessment

Background and context

1. There is ongoing and increasing pressure on health services in New Zealand as the population ages, the 'burden of disease' changes, as expectations rise and as new technologies drive pressure to increase funding.
2. It is of course a good thing that New Zealanders are living longer, healthier lives, however in comparison to previous generations, the health system needs to work harder and smarter to maintain financial sustainability while also adapting to change.
3. This requires having systems in place to meet the increasing health needs and expectations of the population from within available resources. One such approach is Health Technology Assessment (HTA).

Health Technology Assessment systems are important for supporting financial sustainability

4. HTA includes both analytical methods that identify effective, cost-effective and affordable services and interventions; and the processes for supporting decision-makers to prioritise and allocate resources.
5. HTA is best described as a coherent "system" involving multiple entities, including government, crown agencies, research organisations, patients and their representatives, professional societies, health workforce, manufacturers and product developers. The goal is to support decision makers with evidence-based assessments of the value for money of different services and interventions.
6. A well-functioning HTA system would acknowledge that while system actors may have variable and sometimes competing objectives, system settings are in place to align incentives and allow people to "pull together" towards achieving the best health for New Zealanders.
7. Internationally, arrangements for prioritisation and "health technology assessment" make a key contribution to health system financial sustainability by ensuring resources are allocated to their highest value use, where what is "valued" can include not only health gains and value for money, but also improved access and progress on other key priorities.
8. Prioritisation decisions are made whether or not HTA systems are in place. Without overall strategic direction, health systems tend to organically develop approaches to determine which services are provided. While such systems are often pragmatic and adaptive, they run the risk of siloed decision making, unequal access, selective use of evidence, and poor consideration of financial sustainability and system constraints.

Health Technology Assessment systems support a social investment approach

9. HTA is one mechanism for giving effect to social investment in the health system and the Government's social investment priorities can be incorporated into HTA processes and decision making.
10. The general approach used in HTA analysis and processes, of measuring and valuing costs and benefits, can be applied to everything from identifying best value for money in prevention to the likely value for money of shifting resources between sectors or changing a profession's scope of practice.

There are gaps in New Zealand's HTA system arrangements, but also opportunities

11. Currently, New Zealand's health system includes examples of international best practice but is not comprehensive or widespread. There is no other whole of system HTA process for potential investments, outside of Government Budget processes. There are also a limited HTA processes for supporting efforts to spend less on ineffective or harmful services.
12. Although there are gaps, there are also opportunities and options available, and scope to learn from and work with international agencies. Initially, substantial gains could be achieved without the need for formal collaboration by making use of publicly available documentation from other HTA agencies. Although effort would be required to assess applicability and adapt to the New Zealand context, this approach is likely to yield significant gains relative to starting HTAs "from scratch".
13. We understand that PHARMAC has agreed to a formal arrangement with specific HTA agencies in Canada, Australia, England and Scotland. There may also be significant gains through improved knowledge sharing with countries of a similar population size to New Zealand, such as Singapore, Ireland or Norway, with whom could share commercial strategies and pragmatic approaches to setting up comprehensive HTA arrangements³.
14. The consolidation of District Health Boards into Health New Zealand | Te Whatu Ora also presents an opportunity to build consistency of approach across the system (where needed) and to widen what is covered by formal and explicit processes (where optimal).

³ For example, the UK's National Institute for Clinical Excellence (NICE) supports a staff of more than 750, in addition to an extensive research and commissioning budget for academic centres and professional societies – a model that is unlikely to be able to be replicated in New Zealand.

Next steps

15. We are available to discuss with you the steps New Zealand might take to implement a phased programme exploring:
 - a. using HTA arrangements to implement the Government's social investment agenda
 - b. the wider strategic direction of HTA in parallel with existing processes underway in PHARMAC and Health New Zealand
 - c. alignment to the National Medicines Strategy, noting that the practice of HTA is much broader than medicines.

PROACTIVELY RELEASED

Horizon Scanning

Background and context

16. In August 2023, the Ministry's Executive Leadership Team agreed that Horizon Scanning is an integral part of the Ministry's stewardship function and agreed to the development of a pilot project to build this capability.

Horizon scanning is vital to our success as system steward

17. Horizon scanning, which is also called 'Futures Thinking' is a method of developing policy which is not only responsive to the current issues, but which is also developed with consideration of future issues.
18. Horizon Scanning can be defined as the systematic examination of potential threats, opportunities and likely future developments including, but not restricted to those that are at the margins of current thinking and planning. Horizon Scanning may explore novel and unexpected issues, persistent problems or trends, and opportunities.
19. Although many organisations, including a range of Ministries, undertake different forms of futures thinking, the key difference with this project is that it aims to embed the concepts of futures thinking within the Ministry of Health, develop Horizon scanning expertise within the Ministry and to create a system for Horizon Scanning which is enduring.
20. It was agreed that the pilot project would be undertaken jointly by the Ministry's ERI and Strategy, Policy and Legislation directorates. To support the pilot, a working group has been established consisting of representatives from Māori Health, Pacific Health, the Public Health Agency, Clinical Community and Mental Health and Library Services.
21. As agreed by ELT, the primary aims of the pilot project are to:
 - a. identify the resources and capability required to establish a robust and integrated Horizon Scanning function within the Ministry
 - b. produce a high-quality Futures Thinking Report
22. Secondary aims of the pilot project are to:
 - a. establish a core group of individuals throughout the Ministry with experience and leadership skills in Futures Thinking
 - b. develop and strengthen links with relevant external stakeholders and partners to ensure a well-informed and fit-for-purpose Futures Thinking function.

Pilot Project

Pilot topic

23. The pilot project topic '*The Health Effect of Managed Retreat*' was selected by the working group from a short-list of topics initially considered for the Ministry's Long-Term Insights Briefing.
24. Managed retreat involves the relocation of communities from areas prone to, or which have suffered from, natural disasters. Although the focus is on climate induced natural disasters (eg flooding and sea level rise), the knowledge gained from the project may be applicable to natural disasters from other causes, or from man-made disasters.
25. The chosen topic provides an opportunity to address a rapidly emerging issue through a holistic lens as the health impacts from managed retreat will be visible through many determinants of health – such as housing, employment, economy, education, and the environment – in addition to the delivery of and access to healthcare.

Pilot method

26. External engagement will be undertaken as part of the pilot project though the type and extent of engagement is yet to be determined. However, initial discussions have taken place with the Royal Society of New Zealand | Te Apārangi and Ministry of Business, Innovation and Employment to share and align respective work plans and opportunities for collaboration.
27. In addition, a range of Horizon Scanning tools will be used to inform the evidence base for the Futures Thinking report.
28. The project will align with the National Adaptation Plan 2023⁴ and inform the Health National Adaptation Plan which is currently being developed.

Next Steps

29. The incoming Chief Advisor, Horizon Scanning, will provide ongoing leadership of the pilot project and lead the establishment of an enduring Horizon Scanning function within the Ministry.
30. A progress report on the pilot project will be provided to the Ministry's Executive Governance Team in June 2024.
31. The Ministry is available to brief you further on its aspirations for Horizon Scanning and the pilot project.

⁴ <https://environment.govt.nz/assets/publications/climate-change/MFE-AoG-20664-GF-National-Adaptation-Plan-2022-WEB.pdf>