

Māori Health REVIEW™



Making Education Easy

Issue 96– 2022

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Nau mai, haere mai ki a Māori Health Review. We aim to bring you top Māori and Indigenous health research from Aotearoa and internationally. Ngā mihi nui ki Manatu Hauora Māori for sponsoring this review, which comes to you every two months. Ko te manu e kai i te miro nōna te ngahere, Ko te manu kai i te mātauranga, nōna te ao.

Welcome to the 96th issue of Māori Health Review.

In this issue, we feature a report from the Prime Minister's Chief Science Advisor presenting recommendations for tackling infectious disease and antimicrobial resistance in New Zealand. Tackling infectious disease and antimicrobial resistance requires kotahitanga – unity, togetherness – across human, animal, plant, and environmental health. We also include a study showing that pharmacy funding for pertussis vaccination during pregnancy increases uptake, particularly for Māori women. Finally, we include a study highlighting the importance of kaupapa Māori landscaping in the process of healing.

We hope you find this issue informative and of value in your daily practice. We welcome your comments and feedback.

Nga mihi

Dr Matire Harwood

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A longitudinal linkage study of occupation and ischaemic heart disease in the general and Māori populations of New Zealand

Authors: Barnes LA et al.

Summary: Current knowledge regarding the association between occupation and ischaemic heart disease may not be generalisable across different population groups, according to a study which analysed Māori vs non-Māori and males vs females. Surveys of the New Zealand adult population (NZ Workforce Survey [NZWS]; 2004-2006; n = 3003) and the New Zealand Māori population (NZWS Māori; 2009-2010; n = 2107) were linked with routinely collected health data and followed-up until December 2018. Associations with ischaemic heart disease differed significantly across occupational groups and were not consistent across males and females or for Māori and the general population, even within the same occupational groups. In female Māori, 'plant/machine operators and assemblers' (hazard ratio 2.2; 95% CI 1.2-4.1), 'elementary occupations' (hazard ratio 2.0; 95% CI 1.1-3.8) and working in the 'manufacturing' industry (hazard ratio 1.9; 95% CI 1.1-3.7) were all positively associated with ischaemic heart disease. Though NZWS males employed as 'clerks' showed a positive association with ischaemic heart disease (hazard ratio 1.8; 95% CI 1.2-2.7), Māori females showed an inverse association (hazard ratio 0.4; 95% CI 0.2-0.8).

Comment: Although this study wasn't able to determine reasons for the ischaemic heart disease differences by occupation between males and females and ethnicities, it does raise some interesting questions. For example, does stress play a role when you are a minority and potentially exposed to greater discrimination? Or on the other hand, are there protective environmental factors which reduce cardiovascular disease risk when you are part of the majority?

Reference: *PLoS One.* 2022;17(1):e0262636.

[Abstract](#)

Independent commentary by Dr Matire Harwood

Dr Matire Harwood (Ngapuhi) has worked in Hauora Māori, primary health and rehabilitation settings as clinician and researcher since graduating from Auckland Medical School in 1994. She also holds positions on a number of boards, committees and advisory groups including the Health Research Council. Matire lives in Auckland with her whānau including partner Haunui and two young children Te Rangiura and Waimarie.



The impact of transport on population health and health equity for Māori in Aotearoa New Zealand

Authors: Randal E et al.

Summary: Creating a healthier transport system would bring substantial benefits for health, society and the economy, according to a prospective burden of disease study. The study used an existing multi-state life table model to estimate the long-term impact on health and health system costs of removing road injury and transport-related air pollution, and increasing physical activity to recommended levels through active transport. Results showed that 1.28 (95% uncertainty interval 1.11-1.5) million health-adjusted life years would be gained if the NZ resident population alive in 2011 was exposed to no further air pollution from transport, had no road traffic injuries and achieved at least the recommended weekly amount of physical activity through walking and cycling from 2011 onwards. In addition, 7.7 (95% uncertainty interval 10.2-5.6) billion (2011 NZ dollars) would be saved from the health system over the cohort's lifetime. It is likely that more healthy years per capita would be gained by Māori than non-Māori, translating to small but important reductions (2-3%) in present life expectancy gaps.

Comment: Wow. Here we have clear evidence on the potential gains, including equity gains, from a healthier transport system.

Reference: *Int J Environ Res Public Health*. 2022;19(4):2032.

[Abstract](#)

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Adapting traditional healing values and beliefs into therapeutic cultural environments for health and well-being

Authors: Marques B et al.

Summary: An exploration of rongoā Māori has demonstrated the importance of landscape in the process of healing. Semi-structured narrative interviews were conducted with eight rongoā healers or practitioners between June and November 2020. Interpretative phenomenological analysis and Kaupapa Māori techniques were used to analyse transcribed interviews. Findings showed that a complex set of cultural values and beliefs underpin rongoā, drawing from the connection to wairua (spirit), tinana (body), tikanga and whakaora (customs and healing), rākau (plants), whenua (landscape) and whānau (family). Incorporating such constructs into the landscape can provide a culturally appropriate model of care for Māori and non-Māori communities.

Comment: There are many examples of kaupapa Māori landscaping, and how it incorporates and contributes to wellbeing. One such place that inspires me is Pourewa, in Orakei, Auckland. You can see more here - <https://ngatiwhatuorakei.com/pourewa/>. Another indigenous landscaping site I've visited is Kahanu in Hawai'i - <https://ntbg.org/gardens/kahanu/history/>.

Reference: *Int J Environ Res Public Health*. 2021;19(1):426.

[Abstract](#)

Increasing uptake of maternal pertussis vaccinations through funded administration in community pharmacies

Authors: Howe AS et al.

Summary: Pharmacy funding for pertussis vaccination during pregnancy increases uptake, particularly for Māori women, according to a comparison of demographically similar regions in New Zealand. The pertussis vaccine was funded at pharmacies from November 2016 in the Waikato region, but not in Northland or Hawkes Bay. The National Immunisation Register, general practice and pharmacy claims data, and a maternity database were used to identify pertussis vaccination rates during pregnancy in these regions. Compared with the period November 2015 to October 2016, the odds of pertussis vaccination during pregnancy increased to a greater extent in the Waikato (odds ratio 2.07; 95% CI 1.89-2.27) than Northland or Hawkes Bay (odds ratio 1.67; 95% CI 1.52-1.84) over the period November 2016 to October 2019. The vaccination rate was lower for Māori versus non-Māori, but increased to a great extent in the Waikato compared with Northland or Hawkes Bay.

Comment: As you will have read/heard, childhood immunisation rates in Aotearoa have dropped over the past two years, but more so for tamariki Māori. Possible solutions, such as the one described in this paper, must be monitored for equity, and if successful, supported in communities most likely to benefit.

Reference: *Vaccines (Basel)*. 2022;10(2):150.

[Abstract](#)

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Mai i te Manatū

Daily Māori COVID-19 response update

Mai i te Manatū, is a daily pānui sent from John Whaanga, Deputy Director-General, Māori Health, to provide the Māori health and disability sector with the latest COVID-19 updates. This pānui has been sent out since the start of the pandemic, and has provided an opportunity for the Ministry of Health to share relevant COVID-19 information with Māori stakeholders and partners in a way that resonates with them, including through the use of te reo Māori. If you would like to receive these daily pānui, please subscribe by submitting your details on the [Ministry of Health website](#).

The Ministry of Health will also soon be launching 'Kia Tīna', a monthly Māori health pānui that will provide an update on the non-COVID work being led out across the Māori health and disability sector. Further details on subscribing to this will be shared in the next issue of the Māori Health Review.



Consequences of barriers to primary health care for children in Aotearoa New Zealand

Author: Jeffreys M et al.

Summary: An analysis of children enrolled in the Growing Up in New Zealand longitudinal study cohort has revealed ethnic disparities in the proportion of those experiencing barriers to seeing a GP, and increased rates of hospitalisation among those who have experienced barriers. A total of 5947 children who were aged 24 months in 2011/12 and 54 months in 2013/14 were included in the analysis. Overall, 4.7% of children had experienced barriers to seeing a GP in the year to 24 months and 5.5% in the year to 54 months. Barriers were more prevalent among Māori and Pacific children at each age, compared with New Zealand European children. Children facing barriers in the year to age 24 months were twice as likely to be hospitalised in the year to 54 months (odds ratio 2.18; 95% CI 1.38-3.44). When analysed by ethnicity, there was a strong association for Māori children (odds ratio 2.92; 95% CI 1.60-5.30) but no association for New Zealand European children. The study authors concluded that changes to the health system, and future health policy, must align with the New Zealand government's obligations under Te Tiriti o Waitangi, to ensure that health equity becomes a reality for Māori.

Comment: The perfect reference for the Māori Health Authority and Health NZ, as they come together to re-design a health system that will work for whānau.

Reference: *SSM Popul Health. 2022;17:101044.*

[Abstract](#)

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Social determinants and inequitable maternal and perinatal outcomes in Aotearoa New Zealand

Authors: Dawson P et al.

Summary: Maternal health inequity is strongly associated with a range of socioeconomic and health determinants, according to an analysis of 97% of all births (approximately 970,000) in New Zealand between 2003 and 2018. The Statistics New Zealand Integrated Data Infrastructure suite was used to link adverse maternal and perinatal outcomes with socioeconomic and health variables. Compared with New Zealand European/European women, Māori (adjusted odds ratio 1.21; 95% CI 1.18-1.23) and Asian women (adjusted odds ratio 1.39; 95% CI 1.36-1.43) had poorer maternal or perinatal outcomes. Poor outcomes were associated with high use of emergency department (adjusted odds ratio 2.68; 95% CI 2.53-2.84), disability (adjusted odds ratio 1.98; 95% CI 1.83-2.14) and lack of engagement with maternity care (adjusted odds ratio 1.89; 95% CI 1.84-1.95).

Comment: The authors raise an important point when they say that much of the research measuring inequities is failing to advance progress on reducing it. However, as with health inequities themselves, the reasons for 'failing' to intervene can be complex too. As we've seen with the COVID-19 pandemic experience, Māori efforts have received either inadequate support or outright criticism.

Reference: *Womens Health (Lond). 2022;18:17455065221075913.*

[Abstract](#)

Kotahitanga – Uniting Aotearoa against infectious disease and antimicrobial resistance

Author: Prime Minister's Chief Science Advisor

Summary: This report presents recommendations for tackling infectious disease and antimicrobial resistance in New Zealand, drawing heavily on past recommendations, including the 2017 New Zealand antimicrobial resistance action plan. The burden of infectious disease disproportionately affects Māori and Pacific peoples, as well as young and old people, those with underlying health conditions, pregnant women, those living in remote rural areas, and those living in hardship. Tackling infectious disease and antimicrobial resistance requires kotahitanga – unity, togetherness – across human, animal, plant and environmental health. Recommendations follow six themes:

- Elevate and expand antimicrobial stewardship, including developing a coordinated national approach to antimicrobial resistance across human, animal, and plant health
- Develop an integrated surveillance and outbreak response system, including bringing together information on microbes and infections across human, animal, and plant health, and the environment
- Strengthen infection prevention and control, including developing a national approach and expanding standards
- Grow New Zealand's infectious disease capability and engage internationally, including a national strategy encompassing human, animal, and plant health, and establishing an inclusive infectious diseases network
- Enhance human health literacy in patient care settings, public communication campaigns, and education
- Reimagine primary care, including enhancing equity and removing barriers to access healthcare and medicine.

Comment: I am so grateful for the opportunity to be a part of this rōpū, and contribute to this kaupapa. We felt that ingoa 'Kotahitanga' was appropriate for the report, recognising the collective responsibility required for safe antibiotic use – we all play a role in reducing overuse yet ensuring timely, equitable access for those needing them.

Reference: *Office of the Prime Minister's Chief Science Advisor.*

[Abstract](#)

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Research Review publications are intended for New Zealand health professionals.

The impact of ethnicity on stroke care access and patient outcomes

Authors: Thompson SG et al.

Summary: Non-Europeans, especially Māori, have poorer access to key stroke interventions and experience poorer outcomes, according to a nationwide prospective observational study. The study recruited 2379 adults with confirmed stroke from 28 New Zealand hospitals between 1 May and 31 October 2018 and included 11.5% Māori, 4.8% Pacific peoples, and 4.8% Asian peoples. Compared with Europeans, non-Europeans were younger, had more risk factors, had reduced access to acute stroke units (adjusted odds ratio 0.78; 95% CI 0.60-0.97), and were less likely to receive a swallow screen within 24 hours of arrival (adjusted odds ratio 0.72; 95% CI 0.53-0.99) or MRI imaging (odds ratio 0.66; 95% CI 0.52-0.85). Fewer non-Europeans had a favourable modified Rankin Scale score at 3 (adjusted odds ratio 0.67; 95% CI 0.47-0.96, 6 (adjusted odds ratio 0.63; 95% CI 0.40-0.98) and 12 months (adjusted odds ratio 0.56; 95% CI 0.36-0.88). In addition, Māori were less frequently prescribed anticoagulants (odds ratio 0.68; 95% CI 0.47-0.98) and were more likely to die within 12 months (adjusted odds ratio 1.76; 95% CI 1.07-2.89). The study authors concluded that further optimisation of stroke care, targeting high-priority populations, is needed to achieve equity.

Comment: This article not only describes the inequities in a care pathway (for stroke here), and the impacts on outcomes, but specifically mentions Māori-led solutions. The journal's editors, in commenting on this paper, recommended further solution-focused research to achieve equity, such as this project from 2020 - <https://www.ahajournals.org/doi/full/10.1161/STROKEAHA.120.032442>.

Reference: *Lancet Reg Health West Pac.* 2022; 20:100358.

[Abstract](#)



Outcomes for Māori and European patients admitted to New Zealand intensive care units between 2009 and 2018

Authors: Reid AL et al.

Summary: A retrospectively designed prospective cohort study has shown that Māori are more likely to be admitted to intensive care units after trauma or with sepsis than European patients, and are more likely to die within 180 days. The study used data from the Ministry of Health National Minimum Dataset matched to the Australia New Zealand Intensive Care Society Centre for Outcome and Resource Evaluation Adult Patient Database. On average, Māori admitted to intensive care units were 13 years younger than European patients. Of 9681 Māori patients and 42,781 European patients, 10% and 5.2%, respectively, were admitted after trauma, and 7.6% and 4.4%, respectively, with sepsis. The odds of dying with 180 days of intensive care unit admission was 1.08 (95% CI 1.02-1.15) for Māori vs European patients. When adjusted for age, the risk of dying increased substantially, but decreased after adjustment for admission source and type, and after accounting for Māori having a higher comorbidity index and more severe illness than European patients. In the final model, after adjustment for all specified variables, Māori ethnicity was not associated with mortality at 180 days.

Reference: *NZ Med J.* 2022;135(1550):26-46.

[Abstract](#)

Epidemiology of major trauma in New Zealand

Authors: Montoya L et al.

Summary: In a systematic review of 39 studies published up to September 2021 investigating major trauma in New Zealand, Māori men had the highest incidence of both fatal and non-fatal trauma when viewed by ethnicity. Motor vehicle crashes and falls were the most common mechanism of injury among all trauma patients across all age groups. Patients with the highest injury severity scores had the longest hospital stays. The authors concluded that further analytical studies are needed to investigate factors impacting survival from major trauma.

Reference: *NZ Med J.* 2022;135(1550):86-110.

[Abstract](#)

Comment: The thing that most caught my eye for these two papers was the importance of having an excellent registry/database. As a result, services, researchers, clinicians and whānau can monitor care and outcomes. Given our recent experience with the COVID-19 pandemic and limited ability/agility to report on it, it's great to see the government supporting the development of a register for infectious diseases.

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