

# Māori Health Review™



Making Education Easy

Issue 78 – 2019

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### Abbreviations used in this issue

**EMR** = electronic medical record  
**GDM** = gestational diabetes  
**HbA1c** = glycated haemoglobin  
**NCID** = noncommunicable diseases

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## Tēnā koutou katoa

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.

Ngā mihi

### Matire

Dr Matire Harwood

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## The contribution of avoidable mortality to the life expectancy gap in Māori and Pacific populations in New Zealand – a decomposition analysis

**Authors:** Walsh M & Grey C

**Summary:** Using New Zealand death registration and population data from 2013 through 2015, these researchers assessed life expectancy differentials associated with potentially avoidable causes of death within Māori and Pacific populations when compared to the non-Māori/non-Pacific population. As the study researchers explain, avoidable mortality can be used as a measure of how effectively healthcare, health and social policy are contributing to population health and health equity, by how many premature deaths occur from certain conditions and in the presence of timely, effective and equitable healthcare or other appropriate interventions. In each of the three target study populations, much higher proportions of all deaths were attributed to potentially avoidable causes of death among Māori (53.0%) and Pacific peoples (47.3%) than among non-Māori/non-Pacific populations (23.2%). Conditions considered to be both preventable and amenable made the greatest contribution to the life expectancy differentials within both Māori and Pacific groups, compared with non-Māori/non-Pacific. Within Māori males and females, trachea, bronchus and lung cancers accounted for 0.8 and 0.9 years of the life expectancy differential, respectively. Avoidable injuries including suicide contributed as much as 1.0 year to the differential in Māori males. Coronary disease, diabetes and cerebrovascular disease were large contributors to the differential in both Pacific males and females.

**Comment:** The first report of its kind, this paper received a lot of attention in both the editorial of the *N Z Med J* (see <https://www.nzma.org.nz/journal/read-the-journal/all-issues/2010-2019/2019/vol-132-no-1492-29-march-2019/7840>) and in the media (e.g. [https://www.nzherald.co.nz/nz/news/article.cfm?c\\_id=1&objectid=12217309](https://www.nzherald.co.nz/nz/news/article.cfm?c_id=1&objectid=12217309)). A fantastic reference for us and, as the editorial suggests, perhaps we should keep these “figures as screensavers”.

**Reference:** *N Z Med J.* 2019;132(1492):46-60

[Abstract](#)



## INTRODUCING

**John Whaanga**, the newly appointed Deputy Director-General, Māori Health Directorate, Ministry of Health

John is affiliated to Ngāti Rākaipaaka, Ngāti Kahungunu and Ngāti Rongomaiwahine.

In 2018, John was acknowledged in parliament for his work in successfully negotiating a \$100m Treaty of Waitangi settlement for Ngā Iwi me Ngā Hapū o Te Rohe o Te Wairoa – this was the culmination of over 30 years work.

John began his career in the Department of Conservation in 1989 (working on Treaty of Waitangi policy and negotiations),

before moving on to the Ministry of Education (Māori Education Group) in 1991.

John originally joined the Ministry of Health in 1993, as a foundation member of the then newly-established Māori Health Directorate, Te Kete Hauora. John then spent six years working in the Ministry, culminating in management roles in both public health and Māori health (as Manager, Te Kete Hauora).

In the last six years John has undertaken a number of significant roles in tertiary education, including as: Chief

Advisor Wānanga, Tertiary Education Commission; Deputy Chief Executive, Te Wānanga o Aotearoa; and Chief Operating Officer, Taratahi Institute of Agriculture.

John is enjoying being back at the Ministry and re-engaging in the challenge of improving the health outcomes of New Zealanders, in particular addressing current inequities in Māori health.



## Multimorbidity and multiple social disadvantage in a New Zealand high-needs free primary healthcare clinic population: a cross-sectional study

**Authors:** Sreedhar S et al.

**Summary:** Using EMR data for 375 patients registered as of 1 November 2017 with a Dunedin free 'third sector' primary healthcare clinic, these researchers sought to determine the prevalence of multimorbidity and multiple social disadvantage in relation to age, gender, deprivation and ethnicity. Multimorbidity affected around four-fifths (76.5%) of the cohort and half (49.9%) suffered from long-term physical and mental health comorbidities. Across all ethnicities and deprivation quintiles, the researchers found a high level of multimorbidity that increased with age. Of the 10 most prevalent long-term conditions, 7 were mental health conditions. Over half of the cohort (54.7%) had  $\geq 1$  multiple social disadvantage domain recorded.

**Comment:** Some good evidence here about the issues for people being served by clinics in 'high-needs' communities. I suspect the majority of readers work in these services. As the authors suggest, the current health system is not achieving equity and a re-think on how to best manage the complex medical and social issues with our communities is underway. Hopefully, the review panel has access to these articles.

**Reference:** *N Z Med J.* 2019;132(1490):42-51

[Abstract](#)

## Health system costs for individual and comorbid noncommunicable diseases: an analysis of publicly funded health events from New Zealand

**Authors:** Blakely T et al.

**Summary:** These researchers analysed nationally linked data for all publicly funded health expenditure (including hospitalisation, outpatient, pharmaceutical, laboratory testing, and primary care) on 6 noncommunicable diseases (NCDs) listed as cancer, CVD, diabetes, musculoskeletal, neurological, and chronic lung, liver, or kidney disease, for New Zealand adults between 1 July 2007 and 30 June 2014. The data yielded 18.9 million person-years and a total health expenditure of \$US26.4 billion (\$US calculated in 2016). The analysis compared the costs of having  $\geq 2$  NCDs versus those expected from the independent costs of each NCD. It also disaggregated total health spending by NCDs across age and by sex. Around two-thirds (59%) of health expenditure was on NCDs and nearly one-quarter (23.8%) of all health expenditure on chronic NCDs was explained by costs relating to  $\geq 2$  diseases (i.e. costs due to comorbid conditions, exceeding the sum of having the diseases separately). Excess comorbidity costs for patients with 2 diseases were higher for younger-aged versus for older-aged patients; e.g. excess expenditure for 45–49-year-old males with CVD and chronic lung, liver, or kidney disease was 10 times higher than for 75–79-year-old males and 6 times higher for females. The remaining three-quarters of health expenditure was broken down as follows across the 6 NCDs (as though they were the only disease to affect a person): heart disease and stroke, 18.7%; musculoskeletal, 16.2%; neurological, 14.4%; cancer, 14.1%; chronic lung, liver, or kidney disease, 7.4%; and diabetes, 5.5%.

**Comment:** Following on from the previous paper, this study demonstrates the complex nature of comorbidity on costs and the fact that funding is not allocated equitably to areas that generate most cost (neurological and musculoskeletal conditions). Again, a major re-think on what drives the distribution of health funding is required, starting perhaps with our own biases about what is important.

**Reference:** *PLoS Med.* 2019;16(1):e1002716

[Abstract](#)

## Greater insulin response to acute fructose ingestion among Māori and Pacific people compared to European people living in Aotearoa New Zealand

**Authors:** Murphy R et al.

**Summary:** This study was designed to determine mediators of urate responses to a fructose load in a cohort of New Zealanders categorised by ethnicity: Māori (n=25), Pacific (n=26) and New Zealand European (n=25). Blood samples were obtained from each participant after consumption of a 64 g fructose/16 g glucose solution. The bloods were analysed for changes from baseline in lipids, glucose, insulin and C-reactive protein. In analyses accounting for age and gender, glucose and insulin responses were significantly higher among people with higher BMI compared with those with lower BMI ( $p < 0.01$  for both comparisons). Whereas glucose levels were similar among people of Māori or Pacific ethnicity and those of New Zealand European ethnicity ( $p = 0.077$ ), Māori and Pasifika had significantly higher insulin responses ( $p = 0.0005$ ), which remained after additional BMI-adjusted analyses ( $p = 0.001$ ). Sugar-sweetened beverage (SSB) intake was higher in the Māori and Pacific cohort than among New Zealand Europeans (median 1.0 vs 0.0 SSB/day;  $p = 0.002$ ).

**Comment:** Many of you may have met Dr Chris King, a physician from the US who spent a good while in the Hawkes Bay testing this hypothesis. Chris would have been pleased to see these results, confirming his call to curb high-fructose drinks such as soft drinks, apple juice and beer. Sadly, he is not here to see it, as he was only days out from a return trip to Aotearoa to complete his research when shot and killed following a political argument with a President Trump supporter. Moe mai e hoa.

**Reference:** *Intern Med J.* 2019;49(2):196-202

[Abstract](#)

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# Hauora Māori Scholarships

He pūtea tautoko i te akonga Hauora Māori

# 2019

Hauora Māori Scholarships provide financial assistance to students undertaking health-related tertiary study. The purpose of the scholarship programme is to achieve greater participation by Māori in the health and disability workforce and to help ensure the delivery of quality health services for Māori.

Hauora Māori Scholarships are open to any person who:

- is enrolled and attending a university, polytechnic, wānanga, or private training establishment based in Aotearoa
- has whakapapa and/or cultural links with te ao Māori or Māori communities
- can demonstrate a commitment to and/or competence in Māori health and wellbeing studies
- is studying a health-related, NZQA-accredited course.

**FOR MORE INFORMATION PLEASE:**

visit <https://www.health.govt.nz/our-work/populations/maori-health/hauora-maori-scholarships-2019>; email [customerservice@moh.govt.nz](mailto:customerservice@moh.govt.nz); or phone **0800 855 066** (8 am to 5 pm weekdays).

Hauora Māori Scholarships opened on 14 February 2019, and will close on 28 March 2019.

## Pneumococcal conjugate vaccines turning the tide on inequity: a retrospective cohort study of New Zealand children born 2006–2015

**Authors:** Petousis-Harris H et al.

**Summary:** New Zealand introduced pneumococcal conjugate vaccine (PCV)7 in June 2008, PCV10 in 2011, and PCV13 in 2014. In order to evaluate the impact of the PCV vaccination programme on hospitalisations for infectious disease, these researchers collated and analysed annual hospital admissions for invasive pneumococcal disease (IPD), all-cause pneumonia, and all-cause otitis media (OM) for New Zealand children aged <6 years between 2006 and 2015 by age group, ethnicity, geographical area, and socioeconomic deprivation. During the 10-year study period, 640 children were hospitalised for IPD, 26,589 for all-cause pneumonia and 44,545 for OM; hospitalisations for each disease fell by 73%, 8% and 25%, respectively, between 2006 and 2015. Although the hospitalisation rates for all diseases were highest among Māori and Pacific children, the rates fell by a greater extent among these children as compared with declines in hospitalisations among other ethnic groups. Similarly, the declines in hospitalisations fell disproportionately among children from areas of higher socioeconomic deprivation compared with those from less socioeconomically deprived areas.

**Comment:** Evidence confirming the importance of immunisations to improve Māori health and achieve health equity for Māori. As I've said here previously, nurses do an incredible job working with whānau to vaccinate our tamariki. A punitive approach, as recommended by some, is not the way to go.

**Reference:** *Clin Infect Dis.* 2019;68(5):818-26

[Abstract](#)

## Increased admissions due to cardiac complications of thyrotoxicosis in Māori

**Authors:** Tamatea JAU et al.

**Summary:** This analysis retrospectively reviewed the data from all patients admitted with cardiac complications of thyrotoxicosis to a single New Zealand hospital between 1 January 2005 and 31 December 2012. Of 72 patients who were identified as being admitted for a cardiac complication of thyrotoxicosis, 32 were admitted because of dysrhythmia, 12 had ischaemia, 11 were in cardiac failure and 17 had mixed cardiac disease. Thyrotoxicosis was most commonly caused by Graves' disease (n=25) and amiodarone (n=19). The cohort was over-represented by Māori (36.1% vs 16.8% of all cardiac admissions over the same period) and Māori were more likely to present with cardiac failure than non-Māori (57.7% vs 26.1%; p=0.008).

**Comment:** A fantastic clinical study from a Māori physician who has recently completed her PhD. The recommendations made here should guide the assessment and management of CVD, particularly heart failure, risk.

**Reference:** *Heart Lung Circ.* 2019;28(2):284-8

[Abstract](#)

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## The experience of gestational diabetes for indigenous Māori women living in rural New Zealand: qualitative research informing the development of decolonising interventions

**Authors:** Reid J et al.

**Summary:** Using a qualitative and Kaupapa Māori methodology, these researchers interviewed 10 women with type 2 diabetes living in a rural community in Northland (an area marked by high social deprivation), who had experienced gestational diabetes mellitus (GDM) during pregnancy. Analyses of the narratives revealed that intergenerational experiences informed the women's perception of GDM as an inevitable heritable illness, described as a condition that "just runs in the family". Their lives were complicated by the cumulative effects of deprivation and living with GDM, and by their perceptions of powerlessness and mental health deterioration. Accounts of missed opportunities for appropriate diagnostic testing, treatment and health promotion programmes for GDM meant that the women and their offspring faced ongoing health consequences. When women developed positive relationships with healthcare providers, GDM was managed better within healthcare services and by the women themselves.

**Comment:** Okay, I must declare my conflict of interest (I'm an author!), but the results are incredibly powerful and speak to the 'life-course' and inter-generational impact of long-term health and social conditions for Māori whānau. Importantly, simple and effective interventions are described – please consider putting these into practice!

**Reference:** *BMC Pregnancy Childbirth.* 2018; 18(1):478

[Abstract](#)

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## What protects against pre-diabetes progressing to diabetes? Observational study of integrated health and social data

**Authors:** Teng A et al.

**Summary:** Using data from 14,043 adults with prediabetes enrolled in a primary health organisation in the upper North Island of New Zealand, these researchers examined the incidence of type 2 diabetes and sought to determine those factors that protect against this progression. After their first diagnosis of prediabetes (HbA1c ranging from 5.9–6.6% [41–49 mmol/mol]) between 2009 and 2017, the study participants were followed-up for type 2 diabetes incidence. The cumulative incidence of diabetes was 5.0% after 3 years. In Cox regression analyses adjusted for potential confounding, rates of progression were faster in younger adults, men, people with higher HbA1c, greater BMI and in those who were diagnosed more recently. Progression was slower among those treated with metformin and among those speaking te reo (New Zealand's Indigenous language). Higher HbA1c at baseline was associated with higher progression rates for Māori and Pasifika.

**Comment:** Another piece of research that received a lot of media attention, so I have included it here for interested readers.

**Reference:** *Diabetes Res Clin Pract.* 2019;148:119-29

[Abstract](#)

## Kaumātua Mana Motuhake: a study protocol for a peer education intervention to help Māori elders work through later-stage life transitions

**Authors:** Oetzel JG et al.

**Summary:** This article describes a project that has been designed to integrate an Indigenous community of kaumātua with community health researchers and academic researchers working with 2 advisory boards in New Zealand, highlighting the potential of kaumātua (elders) by asserting mana motuhake (autonomy, identity and self-actualisation). Grounded in Kaupapa Māori principles and community-based participatory research, the project emphasises a strengths-based approach. It will follow a 'tuakana-teina' (older sibling/younger sibling) peer-educator model, enabling kaumātua to work with other kaumātua in relation to health and wellbeing. Thus, this project will seek to develop the capacity of kaumātua as peer educators and positively impact upon their sense of purpose, health and wellbeing, as well as endeavour to enhance social and health outcomes for kaumātua receiving the intervention. Findings over time are expected to provide an evidence base for the valuing of kaumātua knowledge that can be used to create contextually-based, culturally safe, age-friendly environments that facilitate engagement and participation by kaumātua for kaumātua.

**Comment:** I enjoyed reading this article because it places kaumātua, their well-being and their knowledge, at its centre. I look forward to hearing about the results.

**Reference:** *BMC Geriatr.* 2019;19(1):36

[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.



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Time spent reading this publication has been approved for CNE by The College of Nurses Aotearoa (NZ) for RNs and NPs. For more information on how to claim CNE hours please [CLICK HERE](#)

## Mismatches between health service delivery and community expectations in the provision of secondary prophylaxis for rheumatic fever in New Zealand

**Authors:** Anderson A et al.

**Summary:** Outcomes are reported from research that explored Māori and Pacific family experiences of recurrences of rheumatic fever, in an attempt to identify and understand barriers for families accessing secondary prophylaxis and ongoing management of rheumatic fever to inform health service improvements. The research employed Kaupapa Māori, Talanga and Kakala Pacific qualitative methodologies. Data were collected through 38 interviews conducted with 80 Māori and Pacific patients who had recurrences of rheumatic fever or unexpected rheumatic heart disease and their families, as well as 9 individual interviews and 6 focus group interviews with 33 health providers working in rheumatic fever contexts throughout 7 geographic regions. Thematic analysis of the data identified a consistent mismatch between the approach taken by rheumatic fever health services and what is needed by the population looked after by those services. The 3 main areas of service mismatch identified were model of delivery, interpersonal approaches to care and adolescent care.

**Comment:** Rheumatic heart disease remains a health priority for Aotearoa because of the huge ethnic disparities and because, despite its elimination in most developed nations, it has increased here. Recurrence is preventable, yet Māori and Pacific children/young people are not receiving equitable prevention. This study highlights the importance of excellent qualitative research. The authors have identified issues along healthcare pathways, unpicked these with the 'people who matter' and in ways that have resulted in practical, effective solutions.

**Reference:** *Aust N Z J Public Health.* 2019 Mar 25. [Epub ahead of print]

[Abstract](#)

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